The Economist

- The Pentagon leaks
- Macron's blunder
- The new era of petrodollar power
- Oregon botches drug decriminalisation

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RIDING HIGH

The lessons of America's astonishing economy

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The world this week Politics

To mark the 25th anniversary of the Good Friday Agreement Joe Biden visited Belfast, where he briefly met the main parties in **Northern Ireland**. The settlement has ensured peace in the province but getting the politics to work has been harder. The agreement requires unionists and nationalists to share power but the devolved assembly has not sat for 40% of the time since 1998, and is suspended now too. The American president then spent three days in Ireland, visiting his ancestral homeland.

Mr Biden tried to reassure America's allies that there would be no more leaks of **classified intelligence**, after the release of a trove of documents online from an unknown source. The sensitive materials show the extent of America's involvement in Ukraine's fight against Russia, including details of Ukrainian battle strengths and weapon deliveries. It was the biggest leak of top-secret information since Edward Snowden's leak of military papers in 2013.

In **Ukraine** Russia stepped up its bombardments in the front-line Donetsk region, as the battle raged for control of the small but strategically important town of Bakhmut. The commander of Ukraine's ground forces said the Russians had switched to the type of "scorched earth" tactics that they had used in Syria defending the Assad regime.

The Biden administration filed an appeal against a judge's ruling that would suspend the sale of mifepristone, an **abortion pill**. The judge sided with an anti-abortion group in deciding that the Food and Drug Administration's approval of mifepristone in 2000 was unsafe, despite few safety concerns being raised during the 23 years it has been on sale.

Driving the agenda

America's Environmental Protection Agency proposed its most stringent measures to date to reduce **car emissions**. The new standards are intended to accelerate the transition to electric vehicles. The EPA thinks the new rules will result in EVs accounting for 67% of new light-duty vehicle sales by 2032. Carmakers were taken by surprise. They are working towards an EV target of 40-50% of car sales by 2030.

Clarence Thomas, a justice on America's **Supreme Court**, defended trips he had taken on a jet owned by Harlan Crow, a generous donor to the Republicans, describing him as a close friend with whom he has taken family holidays for 25 years. News of the trips sparked more criticism of the court's lack of transparency.

Palestinian militants fired salvoes of rockets into **Israel** from Gaza, Lebanon and Syria after clashes between Israeli police and protesters on the Temple Mount in Jerusalem; Palestinian gunmen shot and killed three British-Israeli women in the West Bank; and an Arab-Israeli rammed a car into pedestrians in Tel Aviv, killing an Italian tourist. Meanwhile Israel's embattled prime minister, Binyamin Netanyahu, reinstated Yoav Gallant as defence minister. His sacking had triggered huge protests and strikes.

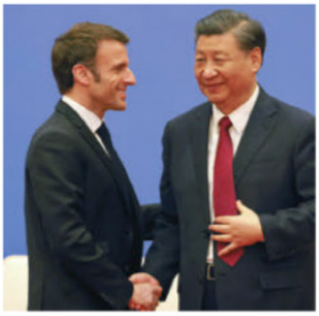
Pirates seized a Singaporean-registered oil tanker in the Gulf of Guinea. It was the second attack in recent weeks. Pirates boarded a Danish-owned oil tanker and kidnapped some of its crew last month.

A court in the United Arab Emirates turned down a **South African** request for the extradition of Atul and Rajesh Gupta, two brothers who are accused of looting state-owned companies during the presidency of Jacob Zuma.

Ethiopia's government said it would disband militias formed by regional governments and integrate their members into the regular police and army. Violent clashes broke out in the Amhara region as people protested against the plan.

Over three days of military drills **China** simulated a blockade and "precision strikes" on **Taiwan**, the self-governing island that it claims. The exercises were in response to a meeting between Taiwan's president, Tsai Ing-wen, and the speaker of America's House of Representatives, Kevin McCarthy, in California.

Macron the blunderer



Meanwhile, President **Xi Jinping** said it was "wishful thinking" to expect China to compromise on Taiwan. After meeting Mr Xi in Beijing, **Emmanuel Macron**, the French president, suggested to reporters that Europe should not follow America's lead, lest it be drawn into a crisis over the island. He later said that France's position had not changed and that it favoured the "status quo" on Taiwan. Brazil's president, **Luiz Inácio Lula da Silva**, also visited China on a trade mission.

America and the **Philippines** began two weeks of joint military training, the largest ever between the two countries, with 12,000 American and 5,000 Filipino troops taking part. America recently secured a deal to maintain a presence in four additional military bases in the Philippines, three of which will be on the main island of Luzon, just 400km (250 miles) south of Taiwan.

At least 100 people were killed when **Myanmar's** army attacked a village that was holding a ceremony to honour the local rebels of the opposition National Unity Government. The attack, by fighter jets and helicopter gunships, was the deadliest in recent months in the country's civil war.

The High Court in Jakarta overturned an order from a lower court that would have delayed **Indonesia's** presidential election by two years. The elections are due to be held in February 2024. Delaying them could have sparked a constitutional crisis. The president, Joko Widodo, known as Jokowi, is due to step down after the election.

The latest missile launch by **North Korea** triggered an evacuation warning across **Japan's** northern island of Hokkaido. The missile fell into the sea.

Silvio Berlusconi remained in intensive care, after being admitted to hospital for a lung infection caused by chronic leukaemia. The former Italian prime minister's Forza Italia grouping is in Italy's coalition government. It holds the post of foreign minister.

Recep Tayyip Erdogan began his campaign for another term as president of **Turkey** in an election to be held on May 14th. He is seeking re-election with inflation at 50%. And he is widely blamed for the lax building codes that caused so many deaths in February's earthquake.

Five councils won the right to legally challenge the expansion of the Ultra Low Emission Zone in **London**. The city's mayor, Sadiq Khan, says the expansion to the outer boroughs will reduce pollution and save lives. Critics say his figures are flawed and the charge for driving in the zone will hit the poorest.

America's annual **inflation** rate fell to 5% in March, the lowest it has been since May 2021. But the core inflation rate, which strips out volatile food and energy prices, rose to 5.6%. There was good news on energy prices. On a month-by-month basis the price of natural gas for consumers fell again, by 7.1%. Petrol dropped by over 4%. But with other data showing another solid monthly increase in the number of jobs created, markets are expecting the Federal Reserve to raise interest rates by a quarter of a percentage point again when it meets in early May.

Murky outlook

The IMF slightly reduced its estimate of growth in the **world economy** this year, to 2.8%. It expects America's GDP to increase by 1.6% and the euro area's by 0.8%, though Britain's could shrink by 0.3%. The fund said that "the fog around the world economic outlook had thickened", in part because of the recent stress in financial markets caused by the collapse of Silicon Valley Bank and Credit Suisse. It also warned of the dangers from investors pricing in lower interest-rate increases.

Ueda Kazuo started his term as the **Bank of Japan's** governor. At his first news conference Mr Ueda reiterated his commitment to sticking, for now, with the central bank's ultra-loose policy of negative interest rates and controls on government-bond yields. In December the bank raised its cap on ten-year government-bond yields, from 0.25% to 0.5%, amid market pressure.

China's cyberspace regulator outlined new rules for dealing with **generative artificial intelligence**, such as requiring firms to submit security reviews to the authorities before releasing new technology to the public. Content generated by chatbots must follow China's "core socialist values" and not "subvert state power". The measures were published shortly after Alibaba unveiled its rival version of ChatGPT. Meanwhile, the American government asked for public feedback on a proposal that could subject new AI bots to a certification process.

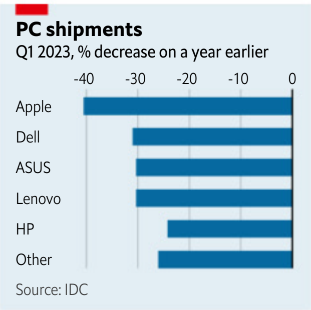
Press reports suggested that **SoftBank** is preparing to sell most of its remaining stake in **Alibaba**, leaving it with a holding of around 4%. The Japanese conglomerate once owned 34% of Alibaba. SoftBank was also reportedly ready to finalise a decision on listing **Arm**, a chip designer, with an IPO on the Nasdaq exchange.

Warner Bros Discovery announced a new combined streaming service, called Max. It merges high-quality programming from HBO, such as "Succession" and "The Last of Us", with unscripted filler from Discovery ("90 Day Fiancé", "Pit Bulls and Parolees"). WBD hopes that the combination of quality and reality TV will help it catch up with Netflix and Disney+.

EY (formerly Ernst & Young) abandoned a plan to separate its auditing and consulting businesses, intended to tackle conflict-of-interest issues. The plan was opposed by senior executives in EY's auditing division in America, who worried that their lucrative work on companies' taxes would end up in the new consultancy. Ditching the split has reportedly caused anger among those partners who would have received a pay-out.

PC shipments

Q1 2023, % decrease on a year earlier



Source: IDC

Global shipments of **personal computers** fell by around a third in the first quarter of 2023, year on year, according to separate reports from two consultancies. The PC business has recorded several quarters of shrinking deliveries, in part because huge demand during the pandemic has dissipated, and also because economic uncertainty is causing firms to put off investments in new machines.

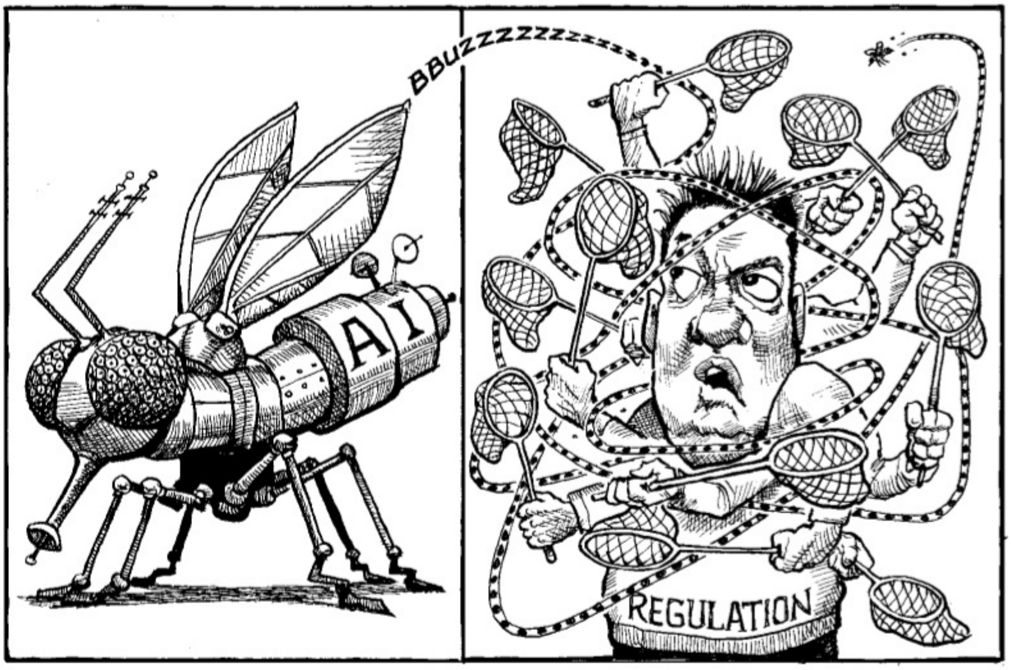
The diminishing demand for PCs is affecting the semiconductor industry. **Samsung Electronics** is to cut production of memory chips by a "meaningful level", after quarterly profit plunged by 96%, year on year. Many of its rivals are also reducing output as chip inventories accumulate.

China recorded a surprising surge in **export** growth for March, reversing five months of declines. Exports were up by 15%, year on year, mostly in electric cars, lithium and solar panels.

A tax by any other name

The **BBC** got into a row with **Twitter** after it was labelled "government funded". The broadcaster gets its money from an annual £159 ($198) household tax (euphemistically called a "licence fee"). Twitter relented and changed the BBC's handle to "publicly funded". National Public Radio in America said it would quit Twitter after it was labelled "state affiliated". Twitter then changed it to government funded.

Tupperware warned that it is on the verge of bankruptcy. The company marketed its food containers through Tupperware parties, the butt of many a suburban joke. Cheaper products have since flooded the market. Tupperware's fate will be sealed if it cannot improve its short-term liquidity.



The Economist

Riding high

The lessons from America's astonishing economic record

If there is one thing that Americans of all political stripes can agree on, it is that the economy is broken. Donald Trump, who saw trade as a rip-off and his country in decline, came into office promising to make America great again. President Joe Biden is spending $2trn remaking the economy, hoping to build it back better. Americans are worried. Nearly four-fifths tell pollsters that their children will be worse off than they are, the most since the survey began in 1990, when only about two-fifths were as gloomy. The last time so many thought the economy was in such terrible shape, it was in the throes of the global financial crisis.

Yet the anxiety obscures a stunning success story—one of enduring but underappreciated outperformance. America remains the world's richest, most productive and most innovative big economy. Along an impressive number of dimensions, it is leaving its peers ever further in the dust.

Start with the familiar measure of economic success: GDP. In 1990 America accounted for a quarter of the world's output, at market exchange rates. Thirty years on, that share is almost unchanged, even as China has gained economic clout. America's dominance of the rich world is startling. Today it accounts for 58% of the G7's GDP, compared with 40% in 1990. Adjusted for purchasing power, only those in über-rich petrostates and financial hubs enjoy a higher income per person. Average incomes have grown much faster than in western Europe or Japan. Also adjusted for purchasing power, they exceed $50,000 in Mississippi, America's poorest state—higher than in France.

The record is as impressive for many of the ingredients of growth (see Briefing). America has nearly a third more workers than in 1990, compared with a tenth in western Europe and Japan. And, perhaps surprisingly, more of them have graduate and postgraduate degrees. True, Americans work more hours on average than Europeans and the Japanese. But they are significantly more productive than both.

American firms own more than a fifth of patents registered abroad, more than China and Germany put together. All of the five biggest corporate sources of research and development (R&D) are American; in the past year they have spent $200bn. Consumers everywhere have benefited from their innovations in everything from the laptop and the iPhone to artificial-intelligence chatbots. Investors who put $100 into the S&P 500 in 1990 would have more than $2,000 today, four times what they would have earned had they invested elsewhere in the rich world.

One retort to this could be that Americans trade higher incomes for less generous safety-nets. America's spending on social benefits, as a share of GDP, is indeed a great deal stingier than other countries'. But those benefits have become more European and, as the economy has grown, they have grown even faster (see United States section). Tax credits for workers and children have become more generous. Health insurance for the poorest has expanded, notably under President Barack Obama. In 1979 means-tested benefits amounted to a third of the poorest Americans' pre-tax income; by 2019 these came to two-thirds. Thanks to this, incomes for America's poorest fifth have risen in real terms by 74% since 1990, much more than in Britain.

For the world as a whole, America's outperformance says much about how to grow. One lesson is that size matters. America has the benefit of a large consumer market over which to spread the costs of R&D, and a deep capital market from which to raise finance. Only China, and perhaps one day India, can boast of purchasing power at such scale. Other countries have sought to mimic it. But even those in Europe, which have got the closest, have struggled to become a true single market. Differences in bankruptcy laws and contractual terms, together with a variety of regulatory barriers, prevent bankers, accountants and architects from touting services across borders.

The size and the quality of the workforce matters, too. America was blessed with a younger population and a higher fertility rate than other rich countries. That may not be easily remedied elsewhere, but countries can at least take inspiration from America's high share of immigrants, who in 2021 made up 17% of its workforce, compared with less than 3% in ageing Japan.

Another lesson is the value of dynamism. Starting a business is easy in America, as is restructuring it through bankruptcy. The flexibility of the labour market helps employment adapt to shifting patterns of demand. Already many of the workers in America who were laid off from Alphabet and other tech firms at the start of the year are applying their sought-after skills elsewhere, or setting up their own businesses. In continental Europe, by contrast, tech firms are still negotiating lay-offs, and may think twice about hiring there in future.

Americans should find the economy's performance reassuring. If history is a guide, living standards will continue to go up for the next generation, even as the country bears the costs of decarbonising the economy. Yet, resilient as the growth record has been, there are shadows. The middle class has seen its post-tax incomes rise by less than those of both the poorest and the richest. A group of people have fallen into hard times. The share of prime-age American men who are not in work has been rising for years and is higher than in Britain, France and Germany. And life expectancy in America lags shamefully behind others in the rich world, mainly on account of too many younger people dying from drug overdoses and gun violence. Tackling such problems should be easier when the economy as a whole is growing. But America's poisonous politics are no help.

In addition, the more that Americans think their economy is a problem in need of fixing, the more likely their politicians are to mess up the next 30 years. Although America's openness brought prosperity for its firms and its consumers, both Mr Trump and Mr Biden have turned to protectionism and the politics of immigration have become toxic. Subsidies could boost investment in deprived areas in the short term, but risk dulling market incentives to innovate. In the long run they will also entrench wasteful and distorting lobbying (see Business section). The rise of China and the need to fight climate change both confront America with fresh challenges. All the more reason, then, to remember what has powered its long and successful run. ■

Geopolitics and non-alignment

Can the West win over the rest?

In a more transactional world the price of influence is going up

It has become common to describe the world as divided between a reinvigorated Western bloc and an autocratic alliance of China and Russia. Yet this way of thinking has its limitations. For a start, the West is not always united, as Emmanuel Macron's botched vanity trip to China demonstrates (see Leaders). And, more strikingly for the great geopolitical contest of the 21st century, at least 4bn people, or more than half of the world's population, live in over 100 countries that do not want to pick sides.

As we explain, these "non-aligned" countries are collectively becoming more important as the global order fragments (see International section). States such as India and Saudi Arabia are making deals across the divide, and want to have more say in world affairs. Make no mistake: this half of the world is so sprawling that it will never act as a bloc. But if you want to understand why the oil price has spiked back over $80, or how supply chains are being remade, or the prospects for peace in Ukraine, non-aligned countries are a growing part of the equation. Their ascent also raises a big question: as China and the West vie for influence over these countries, who will prevail?

Non-alignment has a dubious record. It began in the 1950s as an alliance of developing states that were eager to exert their new-found sovereignty amid rising tensions between America and the Soviet Union. Over the decades the movement degenerated into grandstanding and anti-Americanism. Lacking cohesion, military clout, permanent membership of the UN security council, economic heft or a presence on the frontiers of tech and finance, it had little power. In 1956 John Foster Dulles, America's secretary of state, called non-alignment "immoral". By the cold war's end, it was irrelevant.

At first glance, today's 100-plus ostensibly neutral countries still face many of the same problems as the non-aligned movement did in the 20th century. They have too little in common to be as cohesive as the West, or even the Sino-Russian alliance of convenience: huge democracies such as Brazil and India have few shared interests, let alone a common agenda with a cash-rich monarchy like Qatar. They still rely on the West, China and Russia for technologies, from semiconductors to weapons, and invoice much of their trade in greenbacks.

Yet it is a mistake to underestimate their role, for two reasons. First, their economic clout is rising. Consider the 25 largest non-aligned economies, or the "transactional-25" (defined as those which have not imposed sanctions on Russia, or have said they wish to be neutral in the Sino-American contest). Together they account for 45% of the world's population and their share of global GDP has risen from 11% when the Berlin Wall fell to 18% today, more than the EU. After decades of free-wheeling globalisation, their combined trade pattern is multipolar, with a three-way split between the West, China and other non-aligned states.

Second, their approach to the world, shaped by their desire for national development, has become ruthlessly pragmatic. They have turned into globalisation's most unlikely defenders: from Mexico to Indonesia, they want to trade freely with both sides of the geopolitical divide, while also seizing on the opportunities to profit as supply chains are restructured away from an excessive reliance on China. Pragmatism also means they have limited confidence in the institutions of the post-1945 American-led order such as the UN or IMF, which they see as being in a state of disorder and decay. Western appeals to defend the liberal order or human rights are often seen as being self-serving, inconsistent and hypocritical.

The result is a fluid, transactional approach to the world, as countries wheel and deal in an attempt to gain advantage. The non-aligned often act alone, but sometimes work in concert. OPEC, the oil cartel, is being more assertive; this month it cut production by 4% despite Western complaints. Luiz Inácio Lula da Silva, Brazil's president, is promoting a "peace club" to end the Ukraine war (see Americas section). And India wants to use its presidency of the G20 this year to lobby for the global south.

You can expect these experiments at projecting power to be hit-and-miss—but to grow more ambitious. In tech, India wants to export its "stack" of digital services. In defence, Turkey is selling more arms, including drones and India is expanding its navy (see Asia section). In finance, the system for reinvesting trillions of petrodollars is becoming less centred on the West (see Finance & economics section). Given their limited responsibility for historic carbon emissions and their vulnerability to changing weather, non-aligned countries will understandably seek more say over climate policy.

Even as most countries wish to avoid being forced to join one geopolitical bloc or the other, the superpowers are nonetheless competing to win them over. China sees non-aligned countries as biddable, much as the Soviet Union did. It offers dictators and democrats infrastructure, tech and arms with few strings attached. Yet over time, vulnerable non-aligned countries will surely come to realise that a world in which might is right suits bullies more than anyone else. Authoritarian China's soft power has limits. The citizens of countries that take China's money are hardly queuing to emigrate to Beijing.

When the price is right

Nonetheless, the West needs to gear up to compete for influence. America and its allies must resist the temptation to stoop to tactics that end up turning them into their autocratic opponents. Yet appeals to the liberal order that was set up after the second world war will not be enough to win the argument. Instead, the West must also engage with non-aligned countries in their own transactional terms, with a mix of carrots and sticks.

Some of the West's strengths are enduring: market access, technology and the free flow of information. Other parts of its proposition can be improved, including by offering a more flexible network of security relationships, like the one America already has with India; and other hard benefits, from debt relief to climate finance. The emerging world order is a long way from America's unipolar moment in the 1990s. But in the marketplace for influence, the West can compete. Over 4bn people are keen to see what it has to offer. ■

Europe, China and Taiwan

Macron's blunder

The French president has made a dangerous situation worse

Chinese warships on April 8th once again encircled Taiwan, and fighter jets simulated strikes on the island. Asia is at risk of an armed conflict that could draw in America, and engulf the region in a confrontation with even greater ramifications than the one raging in Europe. It is a moment of high tension between superpowers, when diplomatic words uttered by transatlantic allies need to be weighed with the utmost care.

Yet it was one of Europe's most experienced leaders, Emmanuel Macron, who chose to mark his departure from China, just as this military drill began, by declaring that it was not the continent's business "getting caught up in crises that are not ours". In the name of "strategic autonomy", he said, Europe should not be "followers" of America on a crisis like Taiwan.

Mr Macron's comments, made to a small number of journalists, were worse than unhelpful: they were diplomatically dangerous and conceptually wrong. Though he later corrected them in Europe, the damage had been done to his credibility and the West's unity.

France's president was not wrong to visit Beijing. It is reasonable, too, for Europe to conduct its own policy towards China, however tricky it is to agree on a message. Having alerted fellow Europeans back in 2019 to the strategic threat, Mr Macron is fully aware of the danger that an authoritarian China poses. Yet he fell head first into two traps, presumably to the delight of China's president, Xi Jinping.

Mr Macron's first error was to further China's ambition to divide Europeans and peel Europe from America. The choreography of the trip contributed to both. He had hoped to display European unity, insisting to the Chinese that he bring with him Ursula von der Leyen, head of the European Commission. But that idea collapsed under the weight of Chinese protocol and the doveish Mr Macron's desire to spend hours tête-à-tête with Mr Xi. Mrs von der Leyen, who arrived after making a hawkish speech, got an hour or so in their company.

Mr Macron's comments reflected a worrying failure to measure their broader impact. At a time when liberal democratic powers need a co-ordinated show of strength, he rounded off his visit to an authoritarian ruler by stressing that in such crises Europe should not be dictated to by Washington.

The second error was to undermine allied support for Taiwan. Diplomacy alone will not lower the risk of war. The West also needs to bolster deterrence, without provoking the very conflict it seeks to avoid. France, with bases in the IndoPacific, contributes more militarily to such efforts than any other European Union power. This weekend, amid China's drills, it sailed a frigate through the Taiwan Strait. That is to be commended. But what could have been a display of allied unity and resolve was undermined by Mr Macron's suggestion that Taiwan is not Europe's problem.

What happens to Taiwan matters to Europe. If some Europeans do not want to fight a war, or are reluctant to impose sanctions should China invade, that is for closed-door talks among allies, not public musings. Moreover, by emphasising Europe's autonomy from America, Mr Macron has made life harder for those Americans defending their country's support for Ukraine against domestic critics who wish the money were spent elsewhere.

At stake in Taiwan is the future global balance of power, as well as the protection of democratic freedoms and advanced technologies critical to global trade. Those interests are shared by Americans and Europeans alike. Mr Macron seems to think that he can successfully defend them by working independently. That is a delusion. Together, America and Europe may or may not prevail. Apart, they will usher in a Chinese century. ■

Decriminalising drugs

Lessons from Oregon

States contemplating drug decriminalisation need to prepare the ground properly

America's war on drugs has been a disaster. More than a million Americans have died of overdoses since the government started counting in 1999. No wonder a growing number of states are interested in trying something different. Nine of them are contemplating decriminalising the possession of a small amount of drugs. This newspaper has long championed more liberal laws, but before rushing ahead, reform-minded states—in America and beyond—would do well to consider the experience of Oregon, the only American state so far to enact decriminalisation (see United States section). It has had a rocky start.

Removing criminal penalties for possessing some drugs makes sense. It can reduce prison numbers and the perils of addiction. Portugal decriminalised the possession of drugs for personal use in 2001. In subsequent years overdose deaths and HIV rates fell, and public drug markets disappeared.

Oregon had hoped for a similar success. In a ballot in 2020, 58% of voters backed decriminalisation. As a result, having a small amount of fentanyl, methamphetamine, heroin or LSD now warrants a punishment on a par with a speeding ticket. In the two years since the new law took effect, drug arrests are indeed down. However, overdose deaths in Oregon have risen sharply, far beyond the increase recorded nationally.

Under the old scheme, possession charges were a tool to get people into treatment, because punishments could be dropped if offenders agreed to seek help. However, the thinking in Oregon was that treatment was likelier to work better when it was

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voluntary. The citations for possession that have replaced charges come with a fine of up to $100, which can be waived with a call to a health hotline. The hope was that offenders could then be steered into rehab. But less than 5% of police actions have actually resulted in that phone call.

Worse, even if people do chose addiction treatment, they may not be able to receive it. Recent analysis found that Oregon state has just half the addiction services it needs. The same ballot measure that decriminalised possession also increased funding for some recovery services, but the money started to flow long after the reform entered into force. Even now, the extra funding will not close the yawning gap in services.

Learn before you leap

Oregon's experiment may yet prove a success, but its lessons are clear. First do not rush. The Australian Capital Territory is also in the midst of decriminalising the possession of drugs but, wisely, it is taking a year to prepare and train front-line responders. It is especially important to ensure that treatment is available before moving ahead. The "Field of Dreams" approach to drawing addicts into treatment will not work if you do not actually provide enough places in clinics. And building them is not cheap.

Second, pressure is a necessary part of the policy mix. Many addicts would choose never to walk into a treatment centre. British Columbia, in Canada, is undergoing its own decriminalisation trial and, like Oregon, it has opted not to compel treatment. Yet, with accidental fentanyl overdoses so common, waiting for addicts to hit rock bottom can all too easily prove lethal.

It is better to adopt the sort of approach pioneered in Portugal, where people found with drugs have to appear before dissuasion commissions and are shepherded into treatment. The process is laborious, and that alone can discourage casual drug-taking. Italy, which has also decriminalised drug possession, can suspend the driving licences of frequent offenders.

Drug epidemics have no quick fixes. But the scale of the crisis facing America today is so great that even small improvements are worth striving for. Done correctly, decriminalisation could help people go clean by sparing them the millstone of a criminal record and prevent many deaths from overdoses. That is why it is important to heed the lessons from Oregon. ■

The Human Genome Project at 20

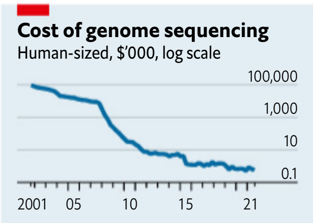
Epic ambition

The genomics revolution has transformed biology. Its work is not over yet

TWENTY YEARS ago the Human Genome Project (HGP) unveiled a mostly complete sequence of the roughly 3bn base pairs of DNA found in every set of human chromosomes. The project was chock-full of ego and hype, but also heralded the rapid improvements and dramatically lower costs of sequencing (see Science & technology section). This fed the success of the burgeoning field of genomics, which has transformed biology and medicine—and still holds plenty of promise.

Genomics has added a new dimension to the study of life and evolution. It has helped scientists understand genes and proteins, and how they govern the growth and function of cells. CRISPR gene editing—a way to precisely modify the DNA in cells—gives researchers a handle on cellular function and dysfunction. The first treatments based on gene editing could be approved within a year. Plant scientists have acquired ways to create disease- and heat-resistant crops.

The era of cheap genome sequencing opened the doors to biology as a data science. The data and findings from the HGP came close to being hidden behind patents. Instead they were opened up to the public, which proved crucial—a useful lesson for other big projects. Biologists' databases now hold the sequences of millions of people and other organisms. This has helped draw links between genes, traits and diseases and also enhanced scientists' understanding of evolution.


Cost of genome sequencing

Human-sized, $'000, log scale

Most of the revolution's tangible effects have been in medicine. Screening for serious but treatable genetic diseases is already possible. Cancer is largely the result of genetics gone awry. Sequencing the genome has become a routine part of treating many tumours. Doing so allows doctors to work out which mutations the cancer has and therefore which course of treatment is likely to work best.

Genomics will increasingly inform doctors' decisions. Starting later this year, 100,000 babies in England will have their genomes sequenced and screened for around 200 conditions. Each disease is rare; together, they affect nearly one in 200 children. Early detection means early treatment, and a higher chance of a better outcome. The hope is that, in time, the precise variations in many hundreds of locations on a person's genome will guide doctors. They seem likely to become a factor in assessments of whether a patient is likely to develop conditions such as cardiovascular disease and type-2 diabetes.

Yet for the genomics revolution to realise its potential, plenty more can be done. Sequencing has fallen in cost from over $50m a genome at the end of the HGP to a few hundred dollars today, but making it even cheaper and more convenient would allow it to be more widely available. People's genetic sequences need to be integrated into their medical records, requiring data infrastructure, digitised records, and the setting of robust security and privacy standards. Scientists must also continue to collect more diverse data, beyond those of patients in the rich world. That will help them understand variations in the genome. Some projects, such as the Three Million African Genomes and GenomeAsia 100k, are already under way.

The science will need to progress further, too. Researchers now have a decent understanding of diseases that are affected by single genes. But they do not yet have a good grasp of how genes interact with each other. And much is unclear about the interplay between groups of genes and people's environments. Nature versus nurture was once a popular debate in genetics but these days is largely seen as a false dichotomy. With genomes as with much successful research, the more you find out, the more you realise that you do not have the whole story. ■

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China and Ukraine

By supporting Russia's catastrophic and illegal war in Ukraine ("The world according to Xi", March 25th) China is also in breach of the China-Ukraine Treaty of Friendship and Co-operation, under which Beijing assured Kyiv in 2013 that it would help Ukraine defend itself. Through the treaty Ukraine recognised that "there is only one China in the world" and the People's Republic of China "is the only legal government representing China". Ukraine agreed that "Taiwan is an inseparable part of China". In return, China supported efforts to protect the territorial integrity of Ukraine. Article 6 went further, stating that neither country shall take actions that damage the sovereignty of the other or permit third countries to damage either countries' territorial integrity.

China's violation of this treaty is the thin end of a dangerous geopolitical wedge. Western democracies should be under no illusion about the scale of China's implicit ambition in cultivating a weak Russia. It is precisely that ambition to which President Xi Jinping was referring when he told Vladimir Putin in Moscow that, "Change is coming that hasn't happened in 100 years and we are driving this change together."

That change includes Beijing's ambition to dominate the world. This includes a new concept of conflict across a spectrum of information war, cyberwar and high-end hyperwar. In Mr Xi's worldview, treaties are merely instruments to constrain and confuse adversaries. Therefore, if China and its vassal Russia succeed there will be a return to the kind of world which preceded both world wars and the destruction of the very institutions which, since 1945, have helped to militate against extreme state aggression.

It would thus be helpful now to remind President Xi of China's responsibilities and its obligations under the China-Ukraine treaty, and to encourage him to cease his further support of Russia's illegal endeavours in Ukraine. In dealing with Mr Xi's China the West must speak softly and carry a big stick.

AIR-MARSHAL SIR CHRISTOPHER HARPER
Former director-general of the NATO International Military Staff
Lamas, Norfolk

DR SARAH KIRCHBERGER
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Kiel University
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PROFESSOR JULIAN LINDLEY-FRENCH
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Censoring "Animal Farm"

I appreciated Bagehot's article on self-censorship in British publishing, pegged to the editing of Roald Dahl's books for sensitivity (March 25th). The column noted that many publishers rejected George Orwell's anti-Soviet masterpiece, "Animal Farm", out of fear of giving offence. Yet it is worth remembering that more traditional censorship played a role as well. One publisher, Jonathan Cape, rejected the manuscript on the advice of Peter Smollett, an official at the British Ministry of Information. Smollett was later revealed to be a Soviet agent. What looks like self-censorship can have surprising, sometimes Orwellian, origins.

JUDGE GLOCK
Austin, Texas

Science and religion

Much as I agree that science and religion need not be in conflict, I must cite a fascinating exception to Nicholas Spencer's claim that neuroscience stands little chance of "finding…morality in an MRI scan" ("Leaps of faith", March 18th). Joshua Greene, Jonathan Cohen and others carried out an ingenious experiment using functional MRI which demonstrated that our inborn sense of right and wrong depends on particular circumstances (published in *Science* in 2001).

Using the hypothetical "runaway trolley" dilemma volunteers were asked about the morality of sacrificing one person to save many others. They gave contradictory answers depending on the context. If asked if it is moral to throw a switch so that a runaway trolley kills a few repairmen on the track to save a much larger number of passengers, the majority said yes. But if asked if it was moral to push one obese person onto the track to save the many the majority said no. The MRI scans showed that only the second scenario activated brain centres involved in emotions and moral choices.

RICHARD WAUGAMAN
Clinical professor of psychiatry
Georgetown University
Washington, DC

Pierre Teilhard de Chardin is among the most important scientists to have tackled this problem. As both a scientist and a Jesuit, he showed how scientific theories, among them the Big Bang and Charles Darwin's work on evolution, could lead to the existence of God, and to another world for humanity. But he also wrote about the evidentiary irrelevance of some Christian dogmas, such as original sin. He used science to give a stronger basis for Christian faith. Needless to say some members of the Catholic church thought he was a heretic and some of his writings were not published until after his death in 1955.

DENIS APVRILLE
Member of the Association des Amis de Teilhard de Chardin
Labège, France

Subversive creativity

I read your leader on the future of video games with a groan ("Storm forming", March 25th). Video games have long been an escape for Western youth. For Generation Z they are an excuse to go wild, create fantasy lands, and be beyond the reach of parental supervision. The corporate push to consolidate and moderate content is another sign that the presence of "the man" (our parents, anyone over the age of 35), is going to dampen the creative chaos and cathartic relief that video games provide.

The business successfully survived attempts in the 1990s and 2000s to censor games like "Grand Theft Auto", in part because the game became a sign of teen rebellion and mostly because video-game developers did not have to pander to parents, who were not GTA's audience or the developer's market. Now that older generations have been co-opted into video gaming its rebellious nature will suffer as developers try to create games that appeal to little Johnny, Uncle Jimmy and all.

KELLEN MCGOVERN JONES
Fort Worth, Texas

Barbie girls and boys

Schumpeter should not be embarrassed by his excitement about "Barbie" (March 25th). It is eagerly awaited among cinephiles. I will watch it before Christopher Nolan's "Oppenheimer", which comes out the same day. We've seen plenty of atomic bombs on the big screen; Margot Robbie and Ryan Gosling playing toy dolls is uncharted territory.

JAMES JIANG
New York

It's no small thing

As a man standing five feet and five inches I can assure you that height plays a significant part in a man's ability to find dates and partners (Graphic detail, March 25th). Ditto to being America's president. And probably everything in between. I am a married attorney, by the way.

BRIAN SHEPPARD
Encino, California

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Jane Leighton
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From strength to strength

WASHINGTON, DC

America's economic outperformance is a marvel to behold, and to squander

AMERICAN ECONOMIC declinism is a broad church. Voices on the right claim that big government has stifled the frontier spirit and that soaring debt has condemned future generations to poverty. The left worries that inequality and corporate power have hollowed out the economy. In a rare display of unity, all parts of the ideological spectrum bemoan the death of American manufacturing and the crushing of the middle class.

There is just one snag. On a whole range of measures American dominance remains striking. And relative to its rich-world peers its lead is increasing.

It is true that, by one measure, America is no longer the largest economy in the world. Using currency conversions based on purchasing power—that is, on what individuals can buy in their own country—China's economy has been larger than America's since 2016. Today China represents 18% of the world economy calculated in terms of purchasing power and America just 16%, whereas in 1990 the shares were 4% and 22% (see chart 1 on next page).

But though purchasing-power parity (PPP) is the right metric for comparing people's well-being in different economies, in terms of what those economies can achieve on the world stage it is exchange rates set by markets that count. And looked at this way, American pre-eminence is clear. America's $25.5trn in GDP last year represented 25% of the world's total—almost the same share as it had in 1990. On that measure China's share is now 18%.

More astonishing, and less appreciated, than its ability to hold its place in the world as a whole is the extent to which America has extended its dominance over its developed peers. In 1990 America accounted for 40% of the nominal GDP of the G7, a group of the world's seven biggest advanced economies, including Japan and Germany. Today it accounts for 58%. In PPP terms the increase was smaller, but still significant: from 43% of the G7's GDP in 1990 to 51% now (see chart 2 on next page). So much for a declining power.

America's outperformance has translated into wealth for its people. Income per person in America was 24% higher than in western Europe in 1990 in PPP terms; today it is about 30% higher. It was 17% higher than in Japan in 1990; today it is 54% higher. In PPP terms the only countries with higher per-person income figures are small petrostates like Qatar and financial hubs such as Luxembourg. A lot of that income growth was at the top end of the scale; the ultra rich have indeed done ultra well. But most other Americans have done pretty well, too. Median wages have grown almost as much as mean wages. A trucker in Oklahoma can earn more than a doctor in Portugal. The consumption gap is even starker. Britons, some of Europe's best-off inhabitants, spent 80% as much as Americans in 1990. By 2021 that was down to 69%.

Money is obviously not everything. It is often argued (and not just in Europe) that Europeans make a trade off between extra pay and a nicer way of life. Instead of clogged roads and overstuffed wardrobes, they have longer holidays and generous maternity leave. What is more, they devote a lot less of their income to health care.

At a personal level such trade-offs may make perfect sense: there is much else to life besides income and shopping. But they are hardly new. Can the long-standing cul-

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tural difference on which they are based really account for a gap that continues to grow today? What's more, America has been devoting a little more of its national treasure to helping its people. America's social spending was just 14% of GDP in 1990 but had risen to 18% by the end of 2019, thanks in part to more medical insurance for its poor and elderly. That hardly makes it Sweden, which has spent a quarter of its GDP on social programmes for decades. But the gap is narrowing, not widening.

Fortunate sons

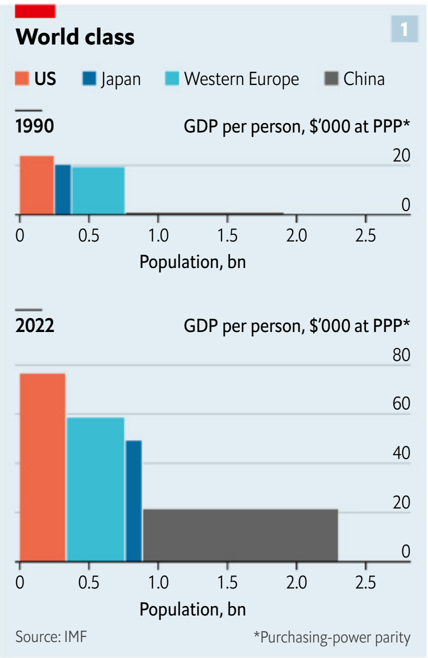
Americans are getting richer because they are getting more productive more quickly than workers in other rich countries. That advantage comes with real costs. America's economy permits extreme volatility in individual livelihoods. Unemployment soars during downturns. Vast numbers end up chucked to the side: a combination of drugs, gun violence and dangerous driving has led to a shocking decline in average life expectancy in America. This suffering is concentrated among the country's poorest, most marginalised communities. Money could mitigate most of these problems, and outperforming America has money aplenty. But this is not what it is spent on.

The fact that America has problems hardly sets it apart. All economies do. The striking thing about America's is that they have not noticeably slowed down its growth. Investors are gratefully aware of this. A hundred dollars invested in the S&P 500, a stock index of America's biggest companies, in 1990 would have grown to be worth about $2,300 today. By contrast, if someone had invested the same amount at the same time in an index of the biggest rich-world stocks which excluded American equities they would now have just about $510 (see chart 3 on next page).

Past performance is, of course, no predictor of future returns. Since America became the world's largest economy in the 1890s its lead has waxed and waned. But three decades in, its current period of outperformance has gone on long enough to merit a closer look.

There are two things that matter to an economy in the long term: the size of its workforce and the productivity thereof. A higher fertility rate and a more open immigration system have long given America a demographic advantage over most other wealthy countries, and that continues. America's working-age population—those between 25 and 64—rose from 127m in 1990 to 175m in 2022, an increase of 38%. Contrast that with western Europe, where the working-age population rose just 9% during that period, from 94m to 102m.

That said, a higher proportion of those Europeans actually work. America's labour-force participation rate has been falling this century, largely because of men dropping out of the workforce. But this American oddity is not large enough to make up for the country's advantage in raw numbers. Even with lower participation, the past three decades have seen America's labour force grow by 30%. In Europe the number is 13%, in Japan, just 7%.

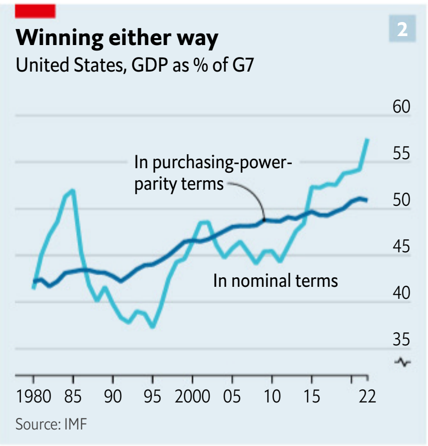


World class

Source: IMF *Purchasing-power parity

And this growing workforce is also becoming more productive. The Conference Board, a think-tank backed by American business, has found that between 1990 and 2022 American labour productivity (what workers produce in an hour) increased by 67%, compared with 55% in Europe and 51% in Japan. Add on to that the fact that Americans work a lot. An American worker puts in on average 1,800 hours per year (a 36-hour work week with four weeks of holiday), roughly 200 hours more than in Europe, though 500 less than in China.

Some of America's productivity growth comes from more investment. But total factor productivity (TFP), which strips out those effects in an attempt to show increases in efficiency and the adoption of new technology, has also increased. According to the Penn World Tables, a database for cross-country comparisons, TFP in America increased by about 20% between 1990 and 2019. The G7 as a whole averaged less than half that.



Winning either way

United States, GDP as % of G7

Source: IMF

How to account for this higher productivity? For starters it is useful to identify where America is at its most productive. In 2019 Robert Gordon of Northwestern University, the dean of growth studies in America, and Hassan Sayed of Princeton divided the economy into 27 different industries to pinpoint the stars. They found them in the flourishing information and communications technology industry, and saw that they shone brightest from the mid-1990s to the mid-2000s. But the rapid growth of the bit of the economy making and connecting computers was only part of the story. The rest of the economy busied itself in using the new technology productively. Productivity growth of American businesses doubled to more than 3% annually during that magical decade, whereas their European counterparts managed less than 2%. Since then American productivity growth has fallen back towards its long-run average of about 1.5%. But it is still faster than in most other rich countries, and still driven by the technology sector.

The roots of America's success as a technological innovator go deep; Silicon Valley was generations in the building. The reason why its wares were put to such productive use, though, are more easily seen, and still apply today. Simply put, they are skills, size and spunk.

Big wheel keeps on turning

First, American workers are, on average, highly skilled. This might seem jarring given conventional wisdom, not least in America, about the failures of its schools. But America spends roughly 37% more per pupil on education than the average member of the OECD, a club of mostly rich countries. When it comes to post-secondary students it spends twice the average.

There are good reasons to question the efficiency of some of this spending: test results in science and maths for 15-year-olds could be better. But good—often privileged—students thrive. As a share of its working-age population, roughly 34% of Americans have completed tertiary education, according to data compiled by Robert Barro and Jong-Wha Lee of Harvard and Korea University. Only Singapore has a higher rate. The Penn World Table's human-capital index, which is based on years of schooling, currently has South Korea in the lead; but America has, on average, been first among major economies since 1990.

America is home to 11 of the world's 15 top-ranked universities in the most recent *Times Higher Education* table. Along with

educating many of the brightest Americans, they have long served as conduits which deliver the world's smartest young people to the country. Some of them go on to join the 200,000 foreign students who enter the labour force through the "optional practical training" programme every year—a figure which stayed high even under Donald Trump.

America's economy makes good use of its highly educated workforce. Spending on research and development across the public and private sectors—a useful, though not infallible, token of future growth—has risen over the past decade to 3.5% of GDP, well ahead of most other countries. Evidence of America's innovative prowess is furnished by the number of its patents in force abroad, an indicator of international recognition: America's share of such patents globally increased from 19% in 2004 (the first year for which data is available) to 22% in 2021, more than any other country.

A second set of explanations is tied to America's size. A large single market always gives a country a leg-up; the rewards to scale seen in technology have amplified this effect in America. Europe has tried to craft a unified market, but linguistic, administrative and cultural differences still pose barriers to businesses such as e-commerce platforms. As India is not yet rich enough for its size to offer benefits on such a scale, China is the only country that can truly rival America in this regard. That helps to explain the vibrancy of its consumer-tech sector—at least until Xi Jinping got his fingers on it.

Size has other advantages. Covering almost 40% of the world's third-largest continent means the United States has access to a wide variety of geological riches—some of which it has become newly adept at winkling out. In the first decade of the 2000s America imported more than 10m barrels of oil per day in net terms. But around the same time, a revolution was under way as energy firms perfected the techniques of hydraulic fracturing and horizontal drilling to release the mineral riches in shale formations that dot the country from North Dakota to Texas. Gas and oil production soared; America now meets most of its energy needs from domestic production. In 2020 it became a net exporter of oil.

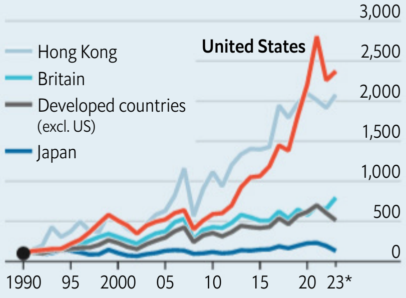
Come on the rising wind

That has both expanded the economy and diversified it, adding new resilience. And because the boom in gas came at the expense of coal, it has reduced greenhouse-gas emissions. Despite having had little federal climate policy worth speaking of until recently, America's industrial carbon-dioxide emissions are 18% below their mid-2000s peak. Now that America is deliberately turning its attention to other resources which its size provides in abundance—such as sunshine and windy plains and coasts—it should accelerate that trend.

Place your bets 3

MSCI stockmarket indices, total return

1990=100



Source: Refinitiv Datastream

*At April 12th

What makes American skills and size that much more potent is the third element in the mix: dynamism. This is often the attribute mentioned first by people trying to explain America's success. It is also the one where definitions are sketchiest. But there are some clear correlates.

One is mobility. The ability and willingness of Americans to get up and go when opportunity calls is not what it was; but it is still impressive in international terms. In 2013 a Gallup survey found that about one in four adult Americans had moved from one city or area within the country to another over the past five years, compared with one in ten in other developed countries. About 5m move between states each year. William Frey, a demographer at the Brookings Institution, finds that the most educated are over-represented among these interstate movers, heading presumably to the most productive jobs.

America also has far and away the world's deepest and most liquid financial markets, providing efficient, if occasionally unstable, channels for financing businesses and sorting the winners from the losers. Stockmarket capitalisation runs to about 170% of GDP; in most other countries it comes in below 100%. Funding for potentially high-growth startups is particularly bountiful: about half of the world's venture capital goes to firms in America.

The hunger for starting something new, though, predates the world of tech and extends far beyond it. And the aftermath of covid-induced confinement has fired the American drive for reinvention as never before: 5.4m new businesses started in 2021, an annual record and a 53% increase from 2019. Many will not make it, but the founders will not be hurt as badly as they would be elsewhere: an OECD measure of the personal cost of failure for entrepreneurs consistently puts America and Canada at the bottom.

Odd as it may sound for a country that created both Mr Burns, the vulture capitalist of Springfield, and Dilbert, the quintessential office drone, the quality of corporate management is another source of dynamism. Since 2003 John Van Reenen of the LSE and Nicholas Bloom of Stanford have been attempting to provide analytical rigour to international comparisons of management by means of their World Management Survey. America sits at the top of their ranking. Fierce competition, the researchers believe, helps to explain America's corporate culture. Bosses are more comfortable with firing employees (and more easily able to: America has much weaker employee-protection law than other large economies). Markets are readier to reward companies for evidence that they are well run. America's managerial strength, their survey finds, explains as much as half of the productivity lead that it has over other developed countries.

It can be hard to square America's incredible wealth with its failings in other areas. Even after taxes and transfers it has the most unequal income distribution in the G7. The earnings gap between rich and poor, which grew in the 1990s and early 2000s, was stabilised by a tight labour market over the better part of a decade. Recent pay bumps for low-wage earners have seen them starting to catch up with the middle tier, but the gap between top- and middle-income workers has persisted.

Run through the jungle

Even more jarring is its harshness of life: on average Americans born today can expect to live to 77, about five years shorter than their peers in other countries at similar levels of development. For the poor, with less access to medical care and more violence around them, the deficit is particularly obvious. A certain sort of Pangloss might argue that the harshness, distasteful as it is, is part of America's recipe, impelling people to strive to get ahead.

Another interpretation is that the country lacks neither the wealth nor wisdom to make people's lives much better, but chooses not to—and pays little by way of an economic price for that choice. "Economics is not a morality play," says Adam Posen of the Peterson Institute for International Economics, a think-tank. "It would be nice if we could design policies that solve inequality and promote growth at the same time, but regrettably there are only a few policies that do both. Cruelty does not prevent an economy from growing."

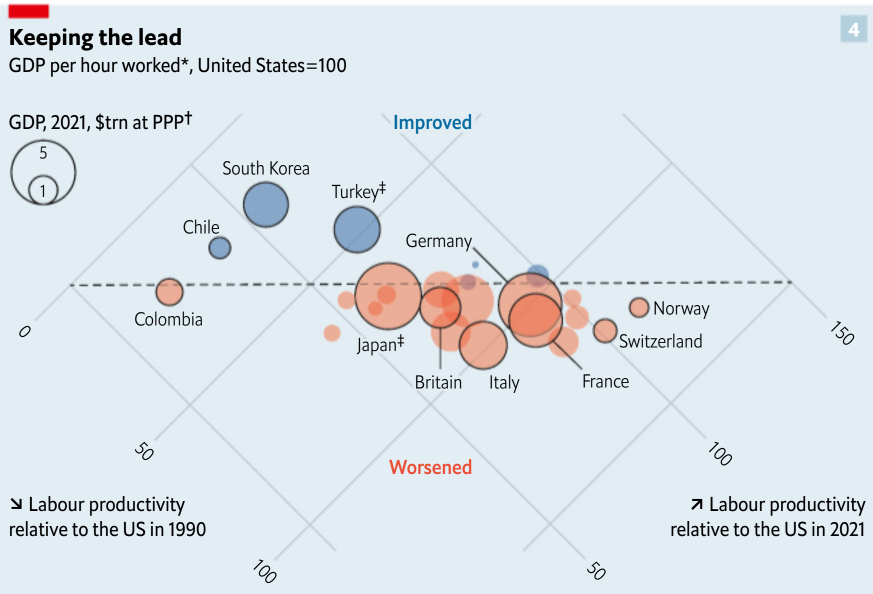
If cruelty doesn't, what else might? What might see America's decades of economic outperformance draw to a close? One possibility would be for its rich-world peers to do more to catch up. Europe has failed to produce giant tech firms like America but its robust anti-monopoly rules have fostered a more competitive market, especially for consumers, which might yet bear fruit. Japan has struggled to shake up its sluggish economic model, but it is not done trying yet. China is intent on sustaining rapid growth, despite evident structural challenges. Meanwhile, India's rise will surely tilt the world's economy ever more towards the Pacific.

But there are also ways for America to undercut its own success. Take demographics. Though America's working-age population has grown more than Europe's over the past 30 years the fertility rate has now drifted close to European levels. With lower fertility, America needs higher immigration to maintain its demographic advantage. But a rising current of nativism pushes against this. President Donald Trump tried, unsuccessfully, to pick apart America's visa programmes for welcoming in high-skilled foreign workers and began building a wall to block lower-skilled arrivals. Even if he fails to win election again in 2024, he has set the tone for more suspicion of and hostility towards migrants. President Joe Biden has kept many of Mr Trump's border policies in place. Border authorities have expelled at least 2m illegal migrants on his watch.

The ugly turn in America's politics also threatens other pillars of success. Highly polarised state governments are starting to endanger the country's vast unified market, forcing companies to face new choices. Texas, for instance, has banned financial firms from doing business with the state if it deems them unfriendly to the oil industry. Ron DeSantis, Florida's governor and a likely candidate for the Republican presidential nomination, has used his office to try and humble Disney in response to the company's "woke agenda". California is attacking from the opposite end, with a new law that could force oil firms to cap their profits.

Keeping the lead

GDP per hour worked*, United States=100



Source: OECD

*Selected OECD countries, 2015 $ at PPP† †Purchasing-power parity ‡Estimate for 2021

The potential for a greater act of political self-sabotage also looms uncomfortably large on the horizon. In the next few months a protracted stand-off between Democrats and Republicans may render Congress unable to lift the federal government's debt ceiling, which would trigger a sovereign default. That would shake the faith of investors in American markets. It also may make funding costs for the government permanently higher, a big risk given the steep rise in public debt during the covid pandemic.

Is the end coming soon?

On trade policy, one area where politicians from both sides of the aisle do see eye-to-eye, the consensus is deeply worrying. Its embrace of globalisation was a crucial background condition for America's long run of strong growth, as a rising trade-to-GDP ration in the 1990s and 2000s makes clear. Foreign competition pushed American companies to make their operations more efficient; opportunities abroad gave them a bigger canvas for growth.

Now, though, globalisation is a dirty word in Washington, DC. A focus on national security and industrial policy has taken over. Take semiconductors: although America long ago lost its mantle as a major manufacturer, it is home to firms, such as Qualcomm and Nvidia, that design the world's most sophisticated chips. That has worked well for America, letting it capture the highest-value segments of the global semiconductor industry.

But it is no longer enough. The government has started to throw billions of dollars at bringing chipmakers to America—in effect trying to hoover up lower-value parts of the industry in the name of supply-chain security. And it is trying to do much the same for electric vehicles, wind turbines, hydrogen production and more, potentially spending $2trn, or nearly 10% of GDP, to reshape the economy. These are aggressive interventions that run counter to America's post-1980s stance; they may end up costing it productivity as well as money.

The overarching irony is that most of these potentially self-harming policies have their roots in a declinist view that, economically at least, simply does not reflect the facts. The diagnoses are that China is getting ahead, or that immigrants are a menace, that large corporations are bastions of woke power and free trade a form of treachery. Their folly is all the more striking because it betrays a lack of appreciation for the bigger economic picture, and just how good America has it. ■

United States

The Pentagon leaks

The slides that came in from the cold

A leak of files is one of America's worst intelligence breaches in a decade

On February 26th officials from the SBU, Ukraine's security service, came to a striking conclusion. Their own agents in Belarus had defied orders and attacked a Russian surveillance plane earlier that day. American spies were listening in. They noted the morsel of intelligence in a highly classified slide on the war in Ukraine circulated by America's joint staff on March 1st. Within days that report had been printed off and uploaded to the internet. So had scores of others. It appears to be America's most serious intelligence leak in a decade.

The leaked files, which include military assessments on the war in Ukraine and CIA reports on a range of global issues, came to broader attention when some appeared on Telegram, a messaging app widely used in Russia. Some had been published on Discord, a chat site popular with video-game enthusiasts, on March 1st and 2nd, according to Bellingcat, an investigative group. Some classified material had appeared as early as January. *The Economist* has reviewed more than 50 slides. Others are still coming to light: the *Washington Post* says that it has reviewed some 300 documents.

Britain's defence ministry said on April 11th that the leak "demonstrated a serious level of inaccuracy". After the slides circulated on Telegram, at least one was crudely doctored to inflate Ukrainian casualty figures and understate Russian ones. But the rest showed no obvious signs of manipulation. Former American and European intelligence officials told *The Economist* that they thought the reports were probably authentic American documents. The Pentagon's response seemed to confirm this. A spokesman said it was leading an inter-agency panel to assess the damage and consulting allies. The Department of Justice opened an investigation into the source of the leak. A report by the *Washington Post* on April 12th suggested the leaker worked on a military base. The timing is terrible: Ukraine is preparing a counter-offensive that could start within weeks. The leaked trove offers a remarkable window into the state of its armed forces.

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Several slides provide an eye-wateringly detailed accounting of Western plans to arm and train Ukraine's army, including the status of nine Ukrainian brigades, the amount of armour and artillery in each one and the precise number of shells and precision-guided rockets Ukraine is firing each day. If accurate, the data could allow Russian military intelligence to identify the specific brigades that have probably been tasked with breaching Russian defences at the outset of the offensive. That, in turn, could allow Russia to carefully monitor those units to assess the location and timing of an offensive. One slide indicates that Ukraine's 10th Corps is likely to command the operation, which will now make its headquarters an obvious Russian target. Another shows when the muddy ground is expected to harden sufficiently for heavy armoured vehicles to pass over.

Perhaps the most damaging documents lay out the state of Ukrainian air defences. These are in dire shape, after parrying repeated Russian drone and missile strikes. The country's Buk missiles were likely to run out on March 31st based on prevailing rates of fire (it is not clear whether this has actually occurred). Its S-300 missiles will last only until around May 2nd. Together the two types make up 90% of Ukraine's medium-range air defences. The remaining batteries, including Western air-defence systems, "are unable to match the Russian volume" of fire, says the Pentagon, though on April 4th it announced it would send more interceptor missiles. Ukraine's ability to protect its front lines "will be completely reduced" by May 23rd, it concludes. A table sets out the date at which each type of missile will be exhausted; a map depicts the location of every battery.

On April 10th the *Washington Post*, citing additional leaked documents, reported that American intelligence analysts had come to a gloomy prognosis for the looming Ukrainian counterattack. "Enduring Ukrainian deficiencies in training and munitions supplies probably will strain progress and exacerbate casualties during the offensive," said the document, judging that the operation was likely to fall "well short" of its objectives and that it would achieve only "modest territorial gains".

Secret signals

However, the documents hardly paint a rosy view of Russia's forces. Though it has devastated the eastern city of Bakhmut—the situation there was "catastrophic" by February 28th, according to Ukraine's military-intelligence chief, who is quoted in one report—its combat power is crippled. America's Defence Intelligence Agency reckons that 35,500-43,000 Russian troops have died, with over 154,000 wounded, 40,000 more than the Ukrainian figure (the agency admits that these numbers are ropy). Russia has also lost more than 2,000 tanks and now fields only 419 "in theatre". Russia's campaign in eastern Ukraine is "heading toward a stalemate", resulting in "a protracted war beyond 2023".

The documents will have wider political consequences. One slide suggests there are 97 special-forces personnel from NATO countries in Ukraine, including 50 from Britain, 17 from Latvia, 15 from France and 14 from America. Most are probably training their Ukrainian counterparts; countries often deploy special forces with considerable secrecy. Even so, the Kremlin is likely to use the disclosure to justify its narrative that it is fighting not just Ukraine but the entirety of NATO.

The leak is also a reminder that American spies collect intelligence on their allies—a fact which caused uproar in 2013 when it was revealed that America's National Security Agency (NSA), responsible for signals intelligence, had spied on Angela Merkel, then German chancellor, among other world leaders. The latest trove shows that American agencies are snooping not only on Ukrainian generals and spooks, but also on officials in Hungary, Israel, South Korea and the International Atomic Energy Agency, a UN watchdog.

One CIA report claims that the leaders of Mossad, Israel's foreign-intelligence agency, encouraged its officials, and Israeli citizens, to protest against controversial judicial reforms. Another, reported by the Associated Press, claims that Russian spies boasted that the United Arab Emirates had agreed to work with them against American and British intelligence agencies.

More importantly, the leaks describe not only who America is spying on but also how it is doing so. The description of the SBU's assessment of the Belarus plane attack, for instance, is marked not merely as top secret—America's highest level of classification—but also "SI-G". That acronym indicates material derived from particularly sensitive signals intelligence, such as phone taps or electronic intercepts, according to officials familiar with the notation. Since many of the documents describe specific communications between individuals or groups, including within Russian military and intelligence agencies, they might help the targets realise how America is obtaining the information.

The publication of these documents is probably one of the four most significant intelligence leaks in this century, says Thomas Rid of Johns Hopkins University, alongside the theft of files by Edward Snowden, a former NSA contractor, in 2013, and the publication of NSA and CIA hacking tools in 2016 and 2017, respectively. The damage could be severe. The leak confirms that American agencies have penetrated Russia to a remarkable degree. But Russian spies and generals are now likely to take protective measures, such as changing their methods of communication.

America's allies may also hesitate before sharing secrets. A vast number of Americans have access to classified information. More than 1m of them, including many contractors, like Mr Snowden, have clearance for top-secret files. And after the attacks of September 11th 2001, which occurred in part because intelligence was not shared quickly and widely enough between agencies, sensitive information was distributed far more extensively. The result was a leakier system.

Ukrainian generals were already wary of revealing their secrets for this reason. Now they might clam up at a vital moment. "If this kind of thing happened in the UK, or in Israel, or Germany, or Australia," says Mr Rid, "the US would have stopped sharing [intelligence] completely." ■

Drugs policy

The Oregon experiment

PORTLAND

Lessons from the first state in America to try drug decriminalisation

"WE'RE KNOWN for microbreweries and marijuana—and now fentanyl and tent cities," says Tony Vezina, who runs 4D Recovery, an addiction-recovery organisation in Oregon. Driving around Portland's Old Town, he points out people smoking fentanyl from pieces of tinfoil. Things were different a dozen years ago, when he was addicted to drugs: then, "you couldn't just be using out in the open."

There are now few, if any, repercussions for having some drugs in Oregon, after the state voted in 2020 to decriminalise the possession of small amounts of drugs. Now, instead of being arrested, if people are caught with substances including fentanyl, heroin, methamphetamine and LSD, they are issued with citations, similar to speeding tickets, and fined up to $100. That fine is waived if the offender calls a hotline and has a health assessment.

The state has ranked among the highest in America for addiction to illicit drugs and lowest for access to treatment. Using the criminal-justice system to treat addiction "was a miserable failure", says Mike Schmidt. As the district attorney in Multnomah County, including Portland, he was in charge of prosecuting possession, but he campaigned for decriminalisation.

Although no one was in prison solely for possession before decriminalisation, a criminal record could make it harder to get a job or a house. Black Oregonians were 2.5 ▸▸

AAA
211
MG
4-15
RYAN
JAN 2021
08/24/21

Get more hands-on, Oregon

times more likely to be convicted of a possession felony than whites. “People suffering from addiction need help, not criminal punishments,” the campaign for the ballot measure proclaimed. Oregonians agreed: 58% voted to decriminalise possession.

Since decriminalisation went into effect in February 2021, help seems hard to come by. It is difficult to know what impact the policy has had on drug use in Oregon in the two years since—especially as, in the country as a whole, use increased during the pandemic. But deaths from drugs rose sharply. The overdose death rate in Oregon almost doubled between 2019 and 2021, compared with a national rise of 50%.

Trying to get people into treatment through citations does not work, says Keith Humphreys of Stanford University. Without meaningful pressure on drug addicts, he says, “there is no mechanism at all to get them to change their behaviour.” From the 4,000 citations issued in Oregon in the first two years of the policy, fewer than 200 people called the hotline and fewer than 40 were interested in treatment. It has cost taxpayers $7,000 per call.

“For a lot of people, the criminal-justice system is their rock-bottom,” says Paige Clarkson, the district attorney in Oregon’s Marion County. Law enforcement had been a tool to push people into treatment, she argues, and decriminalisation “completely negated that tool”. Few jails offer high-quality treatment, but across the country, in 2019, 27% of Americans entering public addiction treatment were sent by the criminal-justice system.

Portugal decriminalised possession of drugs for personal use in 2001, the first country to do so. There, drug-induced deaths have since fallen and street dealing is uncommon. But Portugal’s policy is different: offenders are taken to a police station and must go before a dissuasion panel at the Ministry of Health. Fully 80% of addicts then choose to start treatment. Repeat offenders face punishment, like being banned from bars, or community service, enforced by police. “The state still has a paternalistic approach,” says João Goulão, one of the architects of Portugal’s effort.

Supporters of Oregon’s policy hope that peer mentors—former addicts—can encourage people to enter treatment voluntarily. They were allocated extra funding in the same ballot measure in 2020. But although possession was decriminalised three months after voting, it took another 20 months for the funding to roll out fully. “If I had to do it all over again, I think I would reverse the way that we’ve done it,” reflects Rob Nosse, a state representative.

Even with the extra funding now being spent, Oregon’s drug treatment remains woefully scarce. Addiction-support workers in Portland estimate that the wait for residential treatment can be up to three months. Recent state analysis found that it needed 60% more inpatient facilities. But the extra money will be going to other services, like the mentors, as well as needle exchanges and supported housing.

Oregon is the only state to have attempted decriminalisation. But the bad results may not dissuade others from trying it. Bills to decriminalise possession have been introduced in nine states, including Massachusetts, New York and Washington. In Canada, British Columbia has unveiled its own decriminalisation pilot.

Boosters say decriminalisation has already brought benefits to Oregon, estimating that 7,000 fewer people have been arrested, and that the additional gains need time to become apparent. Oregon’s legislature is in session, but no major reforms are planned. “Give it a chance,” says Mr Nosse.

Yet some have already changed their minds. Mingus Mapps, a member of Portland’s city council, supported decriminalisation. Now he is more wary, particularly of those pushing patience. “You just have to look out on the sidewalks,” he says, “we really don’t have more time.” Mr Mapps regrets that Oregon dismantled a system to deal with addiction, albeit a flawed one, without planning what would replace it. ■

Listen to our podcast

Learn more about a 20-year epidemic at **economist.com/opioids-podcast**

The Republican presidential field

Perverse political maths

WASHINGTON, DC

Why Tim Scott is such a long shot for his party’s nomination

IT IS TREACHEROUS to posit mathematical laws for something as chaotic as politics. Nevertheless, if you scrutinise the likely contenders for the Republican presidential nomination for 2024, you can see an inverse relationship between shamelessness and viability.

At the top is Donald Trump, unhumbled by loss, insurrection or indictment, who this week said he would not stand down even if convicted of crimes: “I’d never drop out, it’s not my thing.” Next is Ron DeSantis, Florida’s governor, willing to abandon his past allegiance to Mr Trump and his past hawkishness on Russia when expedient. Those who try to cultivate a public sense of decency, like Mike Pence, a former vice-president, and Asa Hutchinson, a former Arkansas governor, are far down.

If the relationship holds true, it bodes poorly for Tim Scott, a senator from South Carolina. He announced on April 12th that he would form a presidential exploratory committee—becoming the second figure from the Palmetto State, after Nikki Haley, a former governor, to join the fray. Hardly anyone in the party has a bad word to say about Mr Scott, who grew up from poverty with a single mother to become the first African-American senator to represent a Southern state since 1881. Polling of the state’s Republicans, by Winthrop University, showed Mr Trump’s support at 41%, with Mr DeSantis and Ms Haley close to 20% and Mr Scott back at 7%. And that would be his most favourable state.

He is not a belligerent ideologue. His congressional record was noted most for his championing of “opportunity zones”—a tax-incentive scheme to revitalise left-behind neighbourhoods passed in 2017—and for a bipartisan effort at police reform that eventually foundered. He did not shy away from criticising Mr Trump for his racist remarks, but never broke decisively with him (voting twice against impeachment).

Yet culture warrior is the archetypal role of the modern Republican primary candidate. Mr Scott clearly feels he must play the part. “If the radical left gets their way, millions more families will be trapped in failing schools, crime-ridden neighbourhoods and crushing inflation,” he intones in his launch video. It may not be enough to win, but the vice-presidential role may beckon.

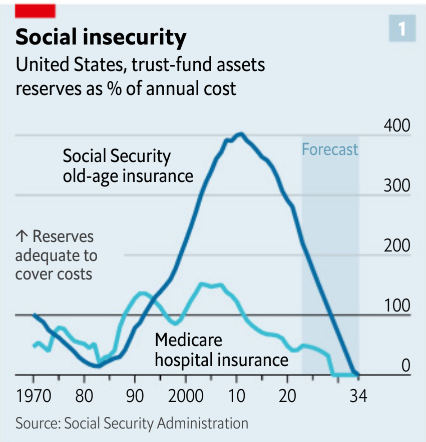
His numbers may not add up to much

Paying for pensions and health

Third-rail thriller

WASHINGTON, DC

America’s entitlement programmes are rapidly approaching insolvency. The politics of reforming them are already broken


Social insecurity 1

United States, trust-fund assets reserves as % of annual cost

Source: Social Security Administration

In some circles, the annual report from the Social Security and Medicare Board of Trustees is as hotly anticipated as a thriller. Admittedly, those circles are not very wide. Read the latest report, released on March 31st, and you can see why most people are happy to avoid the gruesome hobby.

The trust fund that pays for hospital insurance for patients of Medicare, the health-insurance scheme for the elderly, will run out of money by 2031; that is actually a reprieve from the previous estimate of 2028, because of the deadliness of covid-19. The fund that pays old-age benefits for Social Security, the state pension scheme, will be exhausted by 2033 (see chart 1). These mandatory programmes are the behemoths of federal spending, costing $2.2trn (8.6% of GDP) in total in 2022. This eclipses the total of the discretionary spending approved in the federal budget—including on housing, education and even defence—that causes so much argument on Capitol Hill (see chart 2 on next page).

Both programmes would not exactly implode upon the exhaustion of their trust funds, which are built up by payroll taxes on workers. But their benefit levels would drop to match current receipts. The latest projections point to an 11% haircut for Medicare and a 23% one for Social Security when their trust funds run dry. Yet the politics of entitlement reform are so unpalatable that there is little appetite to tackle the problem. Not talking about it “is the one thing these guys can agree on”, says Maya MacGuineas, president of the Committee for a Responsible Federal Budget (CRFB), a non-partisan outfit that does find budget matters thrilling.

The conspiracy of silence is especially curious since there is at present a political crisis brewing over the country’s fiscal position. Republicans are refusing to raise the debt ceiling, a statutory limit on the amount that the Treasury can borrow, seeing their votes as leverage for a fiscal intervention. Yet they cannot agree on what concessions they would like for helping President Joe Biden avoid a default on America’s sovereign debt.

LOVE IT!
IMPROVE IT!
MEDICA
FOR AL
#Me
National Nurses United
BAND-

But what about paying for it?

Kevin McCarthy, the Republican speaker of the House, has blanched at putting forward a formal budget proposal to negotiate with the president. Competing blocs of congressional Republicans have taken to issuing their own in the interim. Their suggestions include capping discretionary spending and repealing the climate provisions of the Inflation Reduction Act (a non-starter for the White House).

But Republicans in Congress are almost unanimous in agreeing that they have no plan to touch Social Security and Medicare, seen as a political third rail that previously shocked both President George W. Bush and Paul Ryan, a former Republican speaker. Mr McCarthy has declared any such discussions “off the table”. A Super PAC supporting Donald Trump is airing attack ads against Ron DeSantis, the Florida governor and his chief rival for the Republican nomination, based on Mr DeSantis’s votes to cut spending on the programmes while he was in Congress. What was once conservative orthodoxy is now contentious.

Democrats have leapt on the disarray of the opposition. “They can’t say what it [their plan] is for two reasons. One, the numbers don’t add up if the hints they’ve dropped are accurate. And two, they don’t want to say what it is because all of its elements are things that their constituents hate, like getting rid of all federal spending that isn’t defence,” says Sheldon Whitehouse, a Democratic senator from Rhode Island and the chairman of the powerful Budget Committee. The Republican strategy, he says, is “to go into a secret room with Biden and a hand grenade and get him to agree to stuff that nobody wants”.

After years of federal profligacy, both parties are pledging austerity in the future. Mr McCarthy says he will come up with a plan to arrive at a balanced budget in the next decade without cutting entitlements or defence spending—which is rather like a mathematician saying he will demonstrate how to square the circle in a decade. Having binged on nearly $5trn in net new spending since he took office, Mr Biden released a budget on March 9th that aims to subtract $3trn from the national debt over a decade, largely through tax increases that Republicans will reject. The plan says it will keep the Medicare fund solvent for 25 years by raising payroll taxes. But on Social Security Mr Biden would leave a shortfall of $5trn between payroll collections and benefit payments over the next decade.

During the standoff in 2011 between Democrats and Republicans, when Barack Obama was president, there was a discussion about a “grand bargain”—gradual changes to entitlement spending in exchange for accepting tax increases. This time, “everyone is saying rather explicitly, ‘we are not talking about entitlement re-

▸▸

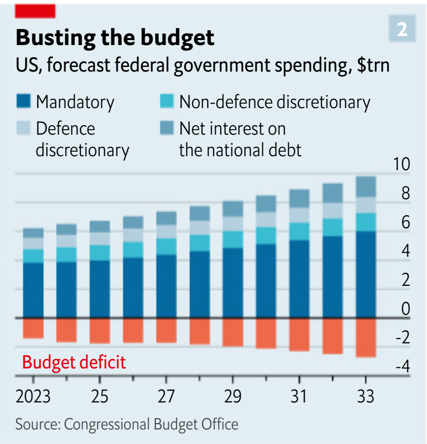
form’,” says Rohit Kumar of PWC, who worked with the Republican Senate leader, Mitch McConnell, during the last standoff. The eventual deal led to “sequestration”: painful spending caps that hamstrung Mr Obama for much of his second term. Now the reticence to discuss entitlements means the resolution of this impasse will probably be more modest, says Mr Kumar.

The cost of debt service has risen since the previous drama—the result of the Federal Reserve raising interest rates to fight inflation. America is expected to pay $640bn (2.4% of GDP) in net interest in 2023; this is projected to grow quickly and exceed defence spending by 2028. In 2029 net interest payments as a share of GDP are expected to exceed their previous high, of 3.16% in 1991. Yet the deficit hawks have never been quite as shy as they are now.

The obvious solution?

The maths of entitlement spending are not complicated. Fixing an imbalance between anticipated revenues and outlays can be solved in two ways: raising taxes or reducing benefits—by, say, pushing up the retirement age or promising less to future generations. (There is a magical third solution of increasing immigration to make the ratio between retirees and workers more manageable, but this cannot remedy America’s trust-fund troubles on its own.) All this is vulnerable to political attack.

For Mr Whitehouse, the Senate budget chairman, the “obvious” answer is raised contributions. At present, payroll taxes for Social Security are set at 12.4% of wages up to $160,000, split between employees and employers. The senator suggests eliminating that limit, which benefits high earners. “If it’s good enough for taxpayers making under $160,000, why do billionaires get a free ride?” If implemented today, doing so would probably cover 63% of the shortfall, according to calculations by the CRFB. Ignoring the issue covers 0% of the shortfall, and probably necessitates even more dramatic policy shocks in the next decade. Guess which one Congress will choose. ■



Busting the budget

US, forecast federal government spending, $trn

Source: Congressional Budget Office

Abortion medication

Mifepristone muddle

SAN DIEGO

The stage is set for another Supreme Court showdown over abortion

NINE MONTHS after America’s Supreme Court rescinded the constitutional right to abortion and, in the words of the majority, returned the issue “to the people’s elected representatives”, a federal judge in Texas has grabbed the matter for himself. On April 7th Matthew Kacsmaryk ruled against an abortion medication that has been used by millions of Americans with few complications. He entered a preliminary injunction nullifying the 23-year-old approval by the Federal Drug Administration (FDA) of mifepristone, one of two drugs commonly used to end pregnancies in the first ten weeks of gestation.

Mr Kacsmaryk’s extraordinary ruling—the first time a judge has revoked the FDA’s approval of a medication—means that residents even of abortion-friendly states could face more obstacles to ending pregnancies. Yet the ruling did not take immediate effect: the judge gave the federal government seven days to lodge an appeal. Both the Department of Justice and Danco Laboratories, mifepristone’s manufacturer, asked the Fifth Circuit Court of Appeals to keep the medication available.

There is another twist. Less than an hour after Mr Kacsmaryk’s order Thomas Rice, a federal judge in the state of Washington, issued an antithetical ruling prohibiting the FDA from ending Americans’ access to mifepristone. The muddle of the competing verdicts led the Department of Justice to ask Mr Rice how his order jibes with the competing one so that the government may “comply with all court orders in these unusual circumstances”.

Mr Kacsmaryk’s ruling is ostensibly concerned with the purported health risks posed by mifepristone, which blocks progesterone, a pregnancy hormone, to women and girls. He agreed with the challengers—a group called the Alliance for Hippocratic Medicine—that the FDA’s approval of the drug in 2000 was rushed. The result, he wrote, has been “many deaths and many more severe or life-threatening adverse reactions” than would have occurred had the “FDA not acquiesced to the pressure to increase access to chemical abortion at the expense of women’s safety”.

Mr Kacsmaryk brushed away studies showing that the drug is safe and effective. “Due to FDA’s lax reporting requirements”, he wrote, the number of bad results is “likely far higher than its data indicate”.

Concern for women’s health may be the stated reason for the lawsuit, but an antipathy to abortion was the primary motivation behind it. The plaintiffs filed their suit in a district where they would be sure to draw a judge known to be hostile to abortion. Before he was tapped for the court by Donald Trump in 2019 Mr Kacsmaryk worked at the First Liberty Institute, a conservative Christian legal organisation with a mission similar to that of the Alliance Defending Freedom, the group that argued the case against mifepristone in his court.

The judge endorsed even the plaintiffs’ most aggressive contention. He agreed that a federal law called the Comstock Act, which dates from 1873, prohibits the mailing of any “article, instrument, substance, drug, medicine or thing” that can be used to cause an abortion.

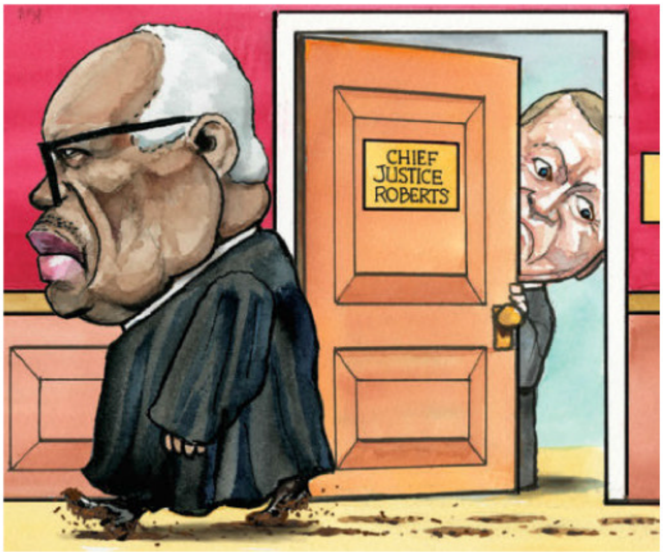
Mr Kacsmaryk’s ruling thus contains the seeds of a sweeping anti-abortion agenda that goes well beyond the Supreme Court’s overturning of *Roe v Wade* last June. His interpretation of the Comstock Act could inspire a prohibition of all abortion in America, because under this reading shipments to clinics of any equipment used in abortion would be illegal. Mr Kacsmaryk also dropped another crumb for those pushing a nationwide abortion ban. His opinion contended that “unborn humans extinguished by mifepristone” are entitled to “individual justice”. This concept of “fetal personhood” would grant fetuses the full panoply of constitutional rights, starting with a right to life.

In response to the Texas ruling President Joe Biden wrote that the court had “substituted its judgment” for the FDA’s. If such second-guessing were to stand, “virtually no” FDA-approved medication “would be safe from these kinds of political, ideological attacks”. Leaders of dozens of drug companies also weighed in against Mr Kacsmaryk’s ruling in a letter criticising the judge for creating “uncertainty for the entire biopharma industry”. And in a friend-of-the-court brief to the Fifth Circuit on April 11th, 169 industry leaders argued that, by overturning the FDA’s drug-approval process, the ruling would “chill crucial research”, undermine investments and “wreak havoc on drug development”.

But the Fifth Circuit is one of America’s most conservative courts, and on April 12th it endorsed nearly all Mr Kacsmaryk’s reasoning except his move revoking FDA authorisation of mifepristone in 2000. So the pill will still be available but, barring further judicial intervention, the standards for prescribing and dispensing it will be far stiffer. The chaos of conflicting rulings means the case seems headed to the Supreme Court. The question will be whether the five justices who overturned *Roe* will leave abortion rights to the states—as they promised—or empower the judiciary to be the last word on the subject. ■

Lexington | Clarence Thomas's rules

His latest scandal raises more questions about the Supreme Court than about him



THAT A PERSON from Clarence Thomas's beginnings could reach the Supreme Court reifies America's fondest dream of itself, as a country that greets individual capacity with boundless possibility. Mr Thomas was born in 1948 in a shack with one electric light and no running water, in the isolated hamlet of Pin Point, on Georgia's coast. When he was about seven he moved with his mother and brother to Savannah, where she worked as a housekeeper and they lived in an apartment that also lacked plumbing.

Then his mother sent the boys to live with her parents. The grandfather—they called him Daddy, having little relationship to their own—put them to work selling heating oil during the school year and planting crops in the summer. As he deemed necessary he beat them, and he never praised them.

Racism in its overt and insidious cruelty bore down on Clarence Thomas from his birth. He drank from black-only fountains and went to black-only schools, and even there his dark skin set him apart. When the teacher stepped out of earshot, lighter-skinned students mocked him as "ABC", America's blackest child.

Planning to be a priest, Mr Thomas went to seminary, but his calling faded as he realised the Catholic church spared little of its righteousness for confronting racism. When he learned that Martin Luther King junior had been shot, his vocation vanished: "That's good," he heard a student say of King. "I hope the son of a bitch dies." After quitting seminary Mr Thomas tried to return home, but his grandfather, who had a third-grade education, kicked him out. "You'll probably end up like your no-good daddy or those other no-good Pin Point Negroes," he said. (Mr Thomas considers his grandfather the greatest man he ever knew.)

Fearing he might never overcome segregation in a nation so racist, Mr Thomas marched and rioted. He also got himself into Yale Law School, only to discover a more insidious racism. In seminary, he was told he was succeeding despite his race; at Yale he felt suspected of succeeding only because of it. He came to fear he would never escape the stigma of racial preference. He drank too much, got divorced and struggled to make ends meet even after he became chairman of the Equal Employment Opportunity Commission under Ronald Reagan. American Express cancelled his card, and he was almost evicted from his rented apartment.

The list of groups who wounded Clarence Thomas is long: light-skinned black people who believed themselves superior; white conservatives who assumed a black man could not share their views; black liberals who believed a black man should not share such views; white liberals who believed that, too; perhaps most, the rich white men, including Joe Biden, who had the gall during his Senate confirmation hearings to question his commitment to racial justice, and then to torment him with accusations of sexual harassment, which he denied. Mr Thomas had played by the rules, he writes in his autobiography, "My Grandfather's Son", only to learn that "whites could change those rules whenever they pleased. It had always been that way, and always would be."

To try to see through Justice Thomas's eyes is to glimpse that he might feel America's elites owe him something, even, perhaps, a half-million-dollar trip by private jet and yacht among the islands of Indonesia. As a justice, he gets to make the rules now, or at least to interpret them. In early April, the investigative publication ProPublica revealed that over two decades Justice Thomas has accepted luxury trips almost every year from Harlan Crow, a right-wing Texas billionaire, without disclosing them.

It is an old Washington tale. Public servants—journalists, too—rub elbows with lobbyists and lawyers who make far more than they do. It may be hard to pity a justice for making $285,400 a year, but it is not hard to imagine some justices pitying themselves, just a little, as they sit listening to arguments from lesser, richer lawyers in bespoke suits. The downside of life tenure is that they, unlike the senators and generals they know, will never cash in as lobbyists. But they can find other ways to spend time in what F. Scott Fitzgerald called "the consoling proximity of millionaires".

No one has made a serious argument that the judge's vacations have corrupted his rulings. Much as liberals despise his judicial philosophy, Justice Thomas came by it the hard way. The last time he was in the news for his ethics, the matter was more troubling: he was failing to recuse himself from cases involving allies of his wife, Virginia, who worked to overturn the 2020 election. The new uproar raises fewer questions about Justice Thomas than about the Supreme Court itself.

Witless for the prosecution

In a statement, Justice Thomas said that years ago he "sought guidance from my colleagues" and learned he did not have to disclose gifts from Mr Crow, as a friend with no business before the court. That shifts the responsibility to the whole court, in particular to the chief justice, John Roberts. Are Justice Thomas's practices typical, and are they OK? The Supreme Court has no code of conduct, and, judging from past comments, Chief Justice Roberts prefers to live in a world of trust and honour.

Who wouldn't? The problem is, that is not the world in which Americans live. Not only because a certain former president constantly says so, the public has good reason to suspect American justice is not on the level. How else could a federal judge feel free to substitute his judgment for that of the Food and Drug Administration and ban a trusted abortion drug? Why else would the political parties spend millions of dollars to contest a swing seat on the Wisconsin Supreme Court? And what else can the public infer from the disregard for precedent of Chief Justice Roberts's court, now that Republicans have shifted its balance? Polling shows most Americans no longer have much confidence in the justice system or the Supreme Court. Maybe the justices should stop making the case for the prosecution, and start mounting a defence. ■

Brazil's foreign policy ambitions

Back in the big league

SÃO PAULO

Luiz Inácio Lula da Silva's foreign policy is hyperactive, ambitious and naive

WHEN LUIZ INÁCIO LULA DA SILVA was elected as Brazil's president in October, his victory speech hinted at his global ambitions: "Today we say to the world that Brazil is back." In his first 100 days in office Lula, as he is known, has tried to prove this with a series of trips abroad. In January he visited his Argentine counterpart. In February he went to the United States to meet President Joe Biden. On April 14th, as *The Economist* went to press, he was due to meet Xi Jinping, China's president, in Beijing. Next week Sergei Lavrov, Russia's foreign minister, will visit Brazil. Lula also wants to lead the fight against climate change and to set up a "peace club" to end the war in Ukraine. His top foreign policy aide secretly travelled to Moscow to discuss the idea with Vladimir Putin, Russia's president, in March.

Much as in his first two terms in office between 2003 and 2010, Lula wants Brazil to have a seat at the table on the thorniest issues of the day. His ambitions should be taken seriously. As president in the early 2000s, Lula charted a pragmatic, independent diplomacy that was bent on pursuing Brazilian interests and creating a "multipolar" world at a time of American hegemony. He helped found the BRICS—a bloc of emerging economies that includes Russia, India, China and South Africa—and irked the United States by trying to broker a deal over Iran's nuclear programme together with Turkey, which would have allowed Iran to ship enriched uranium to Turkey rather than close down its programme.

Yet while Lula's international ambitions have remained grand, Brazil and the world have changed since he was last in office. Brazil is more polarised and Lula's domestic support has diminished: he won the election last year with a 1.8 percentage-point margin, the narrowest victory since Brazil's return to democracy in 1989. China is no longer an emerging market but a world power. War has broken out in Europe and human-rights violations in Latin America have worsened. All this has increased the costs of being chummy with everyone. In Lula's third term, Brazil's commitment to non-alignment will be severely tested. By trying to play the role of global peacemaker, Lula risks looking naive rather than like an elder statesman.

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30 "Total peace" or total chaos?

In many ways, Lula's active diplomacy represents a continuation of Brazilian tradition. Brazil comprises a third of Latin America's population and almost the same share of its GDP. It fought alongside the Allies in both world wars and has long clamoured for a permanent seat at the UN Security Council. Its mediation in local conflicts has helped make South America the region with the fewest interstate wars. The constitution from 1988 says that foreign policy should be based on non-intervention, the peaceful settlement of conflicts and "equality among states".

Brazil's foreign policy suffered under Lula's protégée, Dilma Rousseff, who succeeded him as president, and under her successor, Michel Temer, who turned inwards after economic mismanagement by Ms Rousseff led to a deep recession in the mid-2010s. Jair Bolsonaro, a right-wing populist who was president from 2019 to 2022, worsened matters. He bashed China and mostly visited other nationalists, such as Donald Trump. His enthusiastic support for deforestation made Brazil an international pariah. Lula wants to fix this legacy.

His first balancing act will be managing the rivalry between the United States and China. Mauro Vieira, Lula's foreign minister, has said that Brazil will not have "automatic alignments". At their meeting, Lula and Mr Biden focused on democratic values, human rights and the environment. They bonded over their similar experiences with insurrectionists. (Mr Bolsonaro's supporters attacked government buildings in January, much as some of Mr Trump's supporters did in January 2021.) Yet, though officials say the trip was a success, the outcome was underwhelming. The United States signalled an intention to donate $50m to the Amazon Fund, a billion-dollar mechanism to reduce deforestation. Germany recently committed more than four times as much.

Where's the beef?

By contrast, the agenda with China is more "concrete, wide-ranging and far-reaching", says Sergio Amaral, Brazil's former ambassador to the United States. The trip, originally scheduled for March, was postponed after Lula contracted pneumonia. It was to have included a delegation of five ministers, dozens of legislators and 240 business representatives.

Signs of goodwill abounded ahead of the original trip. Days before, China lifted a suspension on buying Brazilian beef that had been imposed a month earlier, after a case of mad-cow disease was discovered in Brazil. Under Mr Bolsonaro it took three months to get a similar ban lifted. Brazil's government is taking steps to allow trade to be settled in yuan, China's currency. It may sign up to China's Belt and Road Initiative, an infrastructure programme.

More than 20 agreements are expected to be signed on the rescheduled trip, ranging from investments in renewable energy to co-operation on science and technology. Marina Silva, Brazil's environment minister, told *The Economist* that a priority is to seek investments in renewables, particularly in green hydrogen, a fuel that can be made using solar and wind power. Another important area is satellites. But any new deals could unnerve the United States, which worries that satellites could be used to monitor military activity.

Most of the agreements will be about foodstuffs. A third of the business representatives in the original delegation—many of whom arrived before Lula postponed his first trip—came from the agriculture sector. Marcio Rodrigues, the head of exports at Masterboi, a meat-packing giant, was in Beijing in March. He says "the Chinese were very receptive" and points out that, despite Lula not being present, several beef, pork and chicken companies got licences to export to China. Brazil also wants to diversify and add higher-value goods to its export basket. In November China opened its market to Brazilian maize. Now Brazil is set to rival the United States as the world's biggest exporter of the stuff. Rice and certain types of fruits, such as grapes and limes, could be next.

The weight of the agribusiness delegation reflects the nature of the relationship, which is built on the back of Brazilian commodities exports. China surpassed the United States to become Brazil's biggest trading partner in 2009. Today it imports from Brazil almost two-thirds of its soyabeans, two-fifths of its beef, and a fifth of its iron ore. Yet the United States remains by far the largest investor in terms of FDI. In 2020 it held $124bn in investments in Brazil, compared with only $23bn from China, according to Brazil's central bank. Much of what Brazil exports to the United States, meanwhile, is of higher value, including planes and steel. "We depend on both countries," says Dawisson Belém Lopes of the Federal University of Minas Gerais. Deepening trade with China is unlikely to vex the United States.

Lula may alienate Brazil's partners in his ambitions to be a global peacemaker. His earlier attempts to broker a deal over Iran riled the United States. Lula does not appear to have learnt the lesson. His proposal to set up a "peace club" to end the war in Ukraine annoys both the West, which believes Lula has been too soft on Russia, and Xi Jinping, who has his own plan.

So far Lula's attempts at non-alignment have seemed rather one-sided. Although Brazil voted at the UN to condemn Russia for invading Ukraine, Lula has said that Volodymyr Zelensky, Ukraine's president, is "as responsible as Putin for the war". In January he reiterated the point after rejecting Germany's request to send ammunition to Ukraine.

Worth fighting for

He has since softened his language. On April 6th he acknowledged that Russia "cannot keep the Ukrainian territory" it has captured since 2022, though he suggested Ukraine may have to surrender Crimea. Even so, when Lula's top foreign-policy adviser, Celso Amorim, went to Europe in March, he met Mr Putin in Moscow but did not visit Ukraine. The most Lula has done is to Skype with Mr Zelensky. Russia is not just a partner in the BRICS, but supplies a quarter of Brazil's fertilisers. That Mr Amorim met with Mr Putin, rather than someone of similar rank, suggests Russia benefits from playing up ties to Brazil, too.

"If you want to be taken seriously in a conversation to moderate this conflict, you have to visit both sides," says Bruna Santos of the Wilson Centre, an American think-tank. Beyond appearing partial, Lula risks looking naive. Brazil lacks the geopolitical heft to get either Ukraine or Russia to stick to the terms of a deal, says Oliver Stuenkel of the Getulio Vargas Foundation, a university. "There is still a perception that the worst that can happen is that Brazil's peace initiative just doesn't have the desired effect. But there is actually a risk that it could undermine Brazil's relationship with Europe and the United States."

Brazil has better chances of mediating closer to home. Shortly before Mr Amorim went to Moscow he met Nicolás Maduro, Venezuela's autocrat, and members of the Venezuelan opposition (presidential elections are due there next year). Since returning to power, Lula has revived moribund talking shops on regional co-operation, and is pushing for a deal between the European Union and Mercosur, a trade bloc composed of Argentina, Brazil, Paraguay and Uruguay, to be ratified this year. But he may struggle to be an honest broker in Nicaragua, which is ruled by Daniel Ortega, a dictator. Lula compared Mr Ortega's 16-year rule, consolidated by persecuting rivals, to Angela Merkel's democratic tenure of a similar length in Germany. That will hardly endear him to the opposition.

Brazil will, however, have a chance to play a leading role in climate-change policy. Lula is pushing to host COP30, an environmental pow-wow, in 2025. He is also seeking to reactivate the Amazon Pact, a treaty from 1978 that brings together the eight countries that share the rainforest. Between 2004 and 2012 the annual rate of deforestation in the Amazon fell by 80% thanks in part to tougher laws promoted by Ms Silva, Lula's climate tsar at the time. She is now back in her old job.

All this means that Brazil is already a global power on the biggest issue for humanity's future. Lula's legacy may be better served by spending his energy on areas where Brazil has clout, such as the environment, rather than on grand political topics where it has little or none. ■

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1. Fao.org. (2021, March 9). ***Food systems account for more than one third of global greenhouse gas emissions.*** Source: The Food and Agriculture Organization of the United Nations. **2.** Net zero through a combination of reduction, mitigation and compensation measures across our own operations as well as relevant parts of the value chain. **3.** Tetra Pak operations = Scopes 1, 2 and business travel. **4.** Value chain = Scopes 1, 2 and 3.

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Uruguay

Losing its sheen

Violent crime and corruption take the shine off a South American star

SQUEEZED BETWEEN politically polarised Brazil and economically dysfunctional Argentina, Uruguay looks like a model country. More than 95% of its electricity comes from sun, wind, water and biofuels. Same-sex couples can get married. Residents can buy cannabis from pharmacies. In international comparisons Uruguay ranks as South America's most peaceful and least corrupt country. Other leaders skulk in palaces; Uruguay's president, Luis Lacalle Pou, works from a glass office, overlooked by a block of flats.

This sparkling reputation has recently dulled. In February, Alejandro Astesiano—until recently Mr Lacalle Pou's security chief—was sentenced to four and a half years in prison for influence peddling, criminal association and revealing state secrets. Prosecutors said that Mr Astesiano had sold fake birth certificates to Russians so they could get Uruguayan passports. Mr Astesiano has also been investigated for spying, including on opposition senators (which he denies). Alongside this is a recent upsurge in crime. Many wonder whether the country will remain a law-abiding exception in a violent region.

The downfall of Mr Astesiano, a former policeman, is acutely embarrassing for Mr Lacalle Pou, a conservative. He says he had no indication that his ex-bodyguard was up to no good. But in the twenty years they have known each other, Mr Astesiano has had several tangles with the law, which include investigations by the police over allegations of fraud and theft.

It is not the only difficulty for Mr Lacalle Pou's administration. In 2021 the tourism minister resigned after accusations of corruption, which he denies. That year Sebastián Marset, an alleged drug kingpin, escaped capture in Dubai after Uruguayan officials issued him a new passport. In December 2022 the vice-minister for foreign affairs resigned over the case. In January the environment minister quit after it emerged that he had falsely claimed to have a business degree.

Mr Marset is thought to play a role in the events that have made the country a hub of international crime. Gangs ship assault weapons and ammunition between Argentina and Brazil through Uruguay, according to InSight Crime, an investigative outfit. Illegal fishing fleets are taking advantage of lax controls at the free port of Montevideo, the capital.

The security situation has been deteriorating for decades, says Nicolás Centurión, a researcher of organised crime. But covid-19 aggravated the problem. With flights grounded, gangs instead piled Andean cocaine onto containers shipped through Montevideo to Europe. In the past decade, Uruguay's murder rate has nearly doubled, to 11.2 per 100,000 inhabitants in 2022.

Mr Lacalle Pou can probably recover from these recent scandals. Corruption in Uruguay is not endemic, argues Rafael Porzecanski of Opción Consultores, a pollster. In February the president sacked police chiefs associated with Mr Astesiano. Congress is grilling the government about Mr Marset's escape. Even so, crime ranks as the top concern of voters. Mr Lacalle Pou cannot run again, but the stink could imperil the conservatives' chances in elections next year. ■

Colombia's elusive peace

Total chaos

BOGOTÁ

An ambitious ceasefire falters

WHEN GUSTAVO PETRO came into power as Colombia's first avowedly left-wing president last year, he made achieving "total peace" in the country his main priority. Less than a year later, his search for peace appears shakier than ever.

Mr Petro's plans always seemed ambitious. Colombia has been plagued by internal conflict for over half a century. Presidents have wrestled with the problem in varying ways: Iván Duque, his conservative predecessor, encouraged the armed forces to target the heads, or "kingpins", of gangs. Previously, Juan Manuel Santos, president from 2010 to 2018, spent four years negotiating a peace deal with the country's then-biggest and oldest guerrilla group, the Revolutionary Armed Forces of Colombia, known as the FARC. In 2016 most of the FARC agreed to lay down their arms in exchange for reduced sentences, seats in Congress and numerous social guarantees.

In December Mr Petro, who as a young man was a member of M-19, a nationalist guerrilla group, announced a six-month truce with the country's five largest armed groups, including the National Liberation Army (known as ELN), a leftist guerrilla group, and the Clan del Golfo, the largest drug gang. On March 15th the president presented a new law in Congress, which alongside his law on "total peace" establishes the legal framework for the government to negotiate with criminal armed groups and to grant them reduced sentences if they cooperate.

However both the ELN and the Clan del Golfo are no longer part of the ceasefire. The ELN claims it never signed up in the first place, while Mr Petro ended the truce with the Clan del Golfo on March 19th after the gang was found to be involved in a mining strike. The president also faces a struggle to get approval for his new law, which may be voted on in coming weeks. Francisco Barbosa, the attorney-general, criticises the law, which he says will pardon criminals. Mr Barbosa is also concerned that the law erodes the independence of the prosecutor's office.

Alongside this, violent attacks have increased in recent weeks. On March 2nd miners went on strike in Bajo Cauca, after Mr Petro ramped up a military operation to clamp down on illegal gold mining. Colombian intelligence found that members of the Clan del Golfo infiltrated the strikes—forcing shops to close, blocking roads and leaving thousands of people without access to basic goods. It was only after the group burned six vehicles that Mr Petro finally ended the ceasefire.

Similarly on March 29th the ELN attacked an army base in Catatumbo, an area on the border with Venezuela where coca, the raw plant base of cocaine, is grown. Nine soldiers died. Less than a month before, a farmer and a police officer were killed during peasant strikes in Caquetá, in the Amazon region in the south. Over 70 police officers were taken hostage for a day.

"Those events are minor setbacks…it's part of negotiating in the middle of conflict," says Frank Pearl, the chief negotiator with the ELN under Mr Santos. Others are less sanguine. Mr Petro's son and brother are accused of receiving bribes from drug gangs to achieve concessions in the ceasefire process (they both deny wrongdoing). Meanwhile Mr Petro's cabinet turned against him in February over a health reform. "Total peace" looks more like a slogan rather than an achievable goal. ■

The Indian Ocean

Putting the Indo into Indo-Pacific

PERTH AND SINGAPORE

The most powerful navies are swarming to a long-neglected maritime region

A “FREE AND open Indo-Pacific”, intended to encompass both the Indian and the Pacific Oceans, is the hottest geopolitical slogan. When strategists talk about the Indo-Pacific, however, they often mean just the Pacific, and then only the far-western part, around the South China Sea and the East China Sea. It is there that a struggle for primacy is at its fiercest between America, dominant since the second world war, and a resurgent China. Yet the Indian Ocean, relatively neglected until recently, is now having a moment.

The economic dynamism of its rim and great importance of the ocean as a hub for trade in goods and energy have long been recognised. Now its strategic significance is catching up. No single power holds sway in this ocean, and perhaps never will. Yet China is making inroads into its waters and other navies also jostle there for influence. A new oceanic era shaped by great-power rivalry has begun. Smaller Indian Ocean countries wonder whether they will be victims of it, or beneficiaries.

The Indian Ocean stretches from the southern tip of Africa to the Malacca Strait between Malaysia, Singapore and Indonesia; and from the Persian Gulf to far south-western Australia: over 80 degrees of latitude and 100 degrees of longitude (see map). It encompasses three dozen continental and island states accounting for 12% of world GDP. Around its rim live more than 2.6bn people, in countries with a dizzying array of topographies, cultures and economies. On its waters are islands such as the Maldives at the crossroads of strategic shipping routes. Though tiny, they have exclusive rights to huge expanses of ocean.

Signs of sharpening rivalry are everywhere. The navies of America, Australia, Britain, France, India, Japan and Singapore have all patrolled in the Indian Ocean this year. In March the navies of China, Iran and Russia exercised there together. America, Australia and Britain recently announced more details of a plan to base next-generation nuclear-powered submarines in western Australia. Last month Japan’s prime minister, Kishida Fumio, travelled to India to promise $75bn of investment across the Indo-Pacific. Also in India there is wild speculation about a Chinese radar installation in Sri Lanka and a Chinese listening post on Myanmar’s Coco Islands.

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The transport of oil and gas across the Indian Ocean from the Middle East is vital for the vibrant economies of East and South-East Asia. Most of these shipments pass through at least one of three geographic choke-points. The first is the Strait of Hormuz, the narrow exit from the Persian Gulf through which two-fifths of the world’s traded oil passes. Another, the Bab-al-Mandab Strait, lies between the Horn of Africa and the Arabian peninsula, with Eritrea and Djibouti on one side and Yemen on the other. It is the gateway to the Red Sea and the Suez canal. The third area of acute concern is the Malacca Strait, the main shipping channel between the Indian Ocean and Pacific. Just 1.7 miles (2.7km) wide at its narrowest point at Singapore, it sees a fifth of global maritime trade.

Any malign force capable of throttling the choke-points and other crucial entrances to the Indian Ocean would cause immense harm. Bab-al-Mandab and the Strait of Hormuz look especially vulnerable. The Horn of Africa is notorious for piracy and Islamist militancy. As for the Strait of Hormuz, in recent years a hostile Iran has seized or attacked merchant vessels and threatened to close the strait. The Iranian navy is converting two merchant vessels into carriers for kamikaze drones.

The Malacca Strait is better defended than the other two choke-points, yet still has the highest incidence of piracy in the world. In the event of a regional conflict, control of the strait would assume huge importance. With four-fifths of its oil passing through it, China has for years obsessed over how easily a hostile power such as America could close the strait.

In this context, it is important that states with the naval capability to ensure that choke-points remain open not only protect their own interests but provide a global good. These countries are today's Indian Ocean powers. And there are proliferating consequences to their growing naval presence. Reconnaissance missions around choke-points and other vulnerable places increase awareness of what is on the water and under it—including the submarines of potential adversaries. As a result, strategic rivalries among naval states can sharpen even as they co-operate to maintain open sea-lanes, a shared naval objective. That is happening now.

Some of the ocean's former colonial powers remain influential. The tropical island of Réunion is an overseas department of France, which also owns remote islands in the Mozambique Channel. They make France an Indian Ocean power with interests to defend. Britain makes much of its regular Indian Ocean deployments, including by a new aircraft-carrier. Its ships join French ones on patrols and exercises.

Having neglected the Indian Ocean for years, the American navy has increased "freedom of navigation exercises" there. It is also conducting more exercises in the ocean with, among others, Australia, India and Japan, fellow members of the "Quad" security grouping intended to counter Chinese power in the Indo-Pacific. America's navy intends to resurrect its First Fleet, which was disbanded half a century ago, and base it in the Indian Ocean.

Although India sees its chief threats, Pakistan and China, as mainly land-based, it has the strongest naval presence in the northern part of the Indian Ocean. It has increased naval co-operation with America because of concerns about China's growing clout in the region. It is also striving to fill many gaps in its naval capacity.

Australia has been an Indian Ocean power at least since it opened a submarine base in Fremantle during the second world war. Its presence is about to get a huge boost from AUKUS, a defence-technology pact between America, Australia and Britain that will see nuclear-powered submarines based near the same port-city. AUKUS is meant to counter Chinese military expansion in the Indian Ocean as well as the Pacific. Singapore, despite being a small city-state, packs a naval punch, too. And in tiny Djibouti, eight outside powers maintain naval bases, including America, France, Japan and, since 2017, China.

China is the new kid on the Indian Ocean block, with Djibouti its first ever overseas military base. China's naval capabilities have grown fast. Gordon Flake of the Perth USAsia Centre, a think-tank, says it came as a shock to Australia when in 2014 a self-sustaining Chinese naval force appeared in the southern Indian Ocean to help search for the missing Malaysian Airlines flight 370. China's navy has since become the largest in the world by vessel numbers. In Beijing a debate about establishing an Indian Ocean fleet is under way.

The new Indo-China

China wants more bases for support and resupply. Yet, Djibouti aside, it has been slow to secure them. Persistent rumours that the Chinese navy is establishing bases in Hambantota port in Sri Lanka and Gwadar in Pakistan have not been substantiated. China's plans for a commercial port at Bagamoyo in Tanzania are sparking speculation about a naval base there, too. According to Kate O'Shaughnessy, a former Australian high commissioner to Mauritius, "It is in really out-of-the-way places where China is playing a long game in building up its core infrastructure and access to the Indian Ocean."

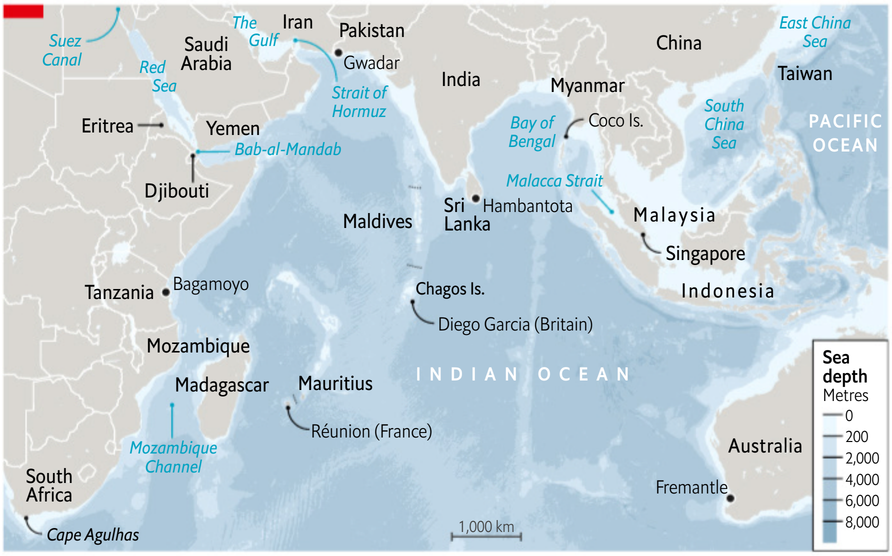
The smaller countries of the Indian Ocean view renewed interest by stronger powers with both satisfaction and alarm. They suffer more than anyone from the instability caused by rogue-state or non-state actors (such as pirates, Islamists and drug smugglers) and so welcome naval patrols. Growing strategic rivalry is also to their advantage when countries woo them with development goodies, such as infrastructure projects.

But, as Darshana Baruah of the Carnegie Endowment for International Peace, a think-tank in Washington, points out, small states fear being suborned by big ones for use in projecting power—as happened during the cold war. Strategic rivalry between an American-led camp and China, if it does not take into account the interests of small countries, would be disastrous, says Abdulla Shahid, foreign minister of the Maldives. "That would seriously undermine our security and our prospects."

Conceivably, rivalry between the West and China could hurt smaller countries' relationships with both camps, especially if big powers ignore the different security priorities of smaller countries. They care much less about military competition than climate change; illegal, unreported and unregulated (IUU) fishing; plastics pollution; and oil spills threatening tourism. Small states, Mr Shahid concludes, must preserve their independence of action. That will mean doing business with China even if America and its allies disapprove.

By recognising small countries' priorities, Western powers—and India—could help counter China's advances. On climate, rich countries have promised cash and other help for adaptation. But most small states have yet to see it. Helping them protect their fisheries would be another easy win. Relatively small steps by big countries can be big wins for small ones.

The increasing rivalry in the Indian Ocean does not preclude areas of partnership. The navies of America and China cooperate in patrolling sea lines of communication off the Horn of Africa, for example. Still, the regional security dynamic is growing more complex, multilayered and prone to miscalculations. That is the Indian Ocean's emerging new reality. ■



Bubble tea

Boba generation

BANTEN

Chinese tea brands are conquering South-East Asia

OPPOSITE A UNIVERSITY campus on the outskirts of Jakarta, motorbikes line the front of Ricky Salim's ice-cream and tea store. One of thousands of Mixue franchise owners across Asia, Mr Salim says his business is so good he hopes to open more outlets this year. Mixue, a Chinese firm which built its brand selling flavoured teas and soft-serve ice-cream in smaller Chinese cities with relatively modest average incomes, is exporting its model across South-East Asia. Its nearly 22,000 franchised stores worldwide, by early last year, made it the fifth-largest fast-food chain in the world by outlet, behind McDonald's, Subway, Starbucks and KFC.

Part of the reason for Mixue's success is that it sells rising Asia's favourite drink: bubble (or "boba") tea, a milky tea containing chewy tapioca balls. In China, the market for these newfangled, flavoured teas was twice that for coffee in 2021, with a $20bn turnover, according to Momentum Works, a research firm in Singapore. As growth has slowed in China, bubble-tea brands have set their sights on South-East Asia, where the market was worth $4bn. Several other large, Chinese, ready-made tea brands, including HeyTea, Nayuki Tea, ChaGee and Happy Lemon, have also moved into the region.

Yet no bubble-tea chain has spread faster than Mixue, which opened its first store in Vietnam in 2018. By March it had around 1,500 stores in Indonesia; the firm wants to double its presence there by the end of this year, says Andy Meitri Hartanto, Mixue Indonesia's franchise manager. The brand's bright red signage and snowman logo can already be found in malls, along dusty side streets and on shophouses across Indonesia. Many branches stock board games, magazines, picture books and soft toys. On weekends Mr Salim's outlet fills with parents taking their children out for ice-cream, while during the week his main customers are students and office workers looking for an affordable, comfortable place to study or work. An ice-cream costs just 8,000 rupiah ($0.50).

Almost all Mixue branches are franchises. Around 95% of the firm's 10.3bn yuan ($1.5bn) in revenue in 2021 came from selling ingredients, packaging and equipment to franchise-holders. Huge factories and extensive supply chains let it keep down the store-price of ice-creams and teas, according to Zheshang Securities, a Chinese broker. Around 90% of Mixue Indonesia's products are imported from China. But the company's Indonesia operation has grown to such an extent that it plans to start making ingredients locally, says Mr Hartanto. Mixue has also adapted to local conditions. The Indonesian Ulema Council, a religious body, declared Mixue halal in February. In a country with 230m Muslims, "this decision was a big deal", says Mr Salim.

MIXUE
SINCE 1997 · ICE CREAM&TEA
MIXUE RAWAMANGUN
OPEN NOW!

Do you want to build a snowman?

Mixue dates from 1997, when its founder, Zhang Hongchao, started selling shaved ice and drinks at a roadside stall in the central Chinese province of Henan. Yet it wasn't until videos of its mascot, a chubby snowman, singing the Mixue theme song went viral on Chinese social media a few years ago that the brand became a household name. Short videos on Mixue, which means "honey snow" in Mandarin, have been viewed more than 17bn times on Douyin, TikTok's Chinese sister app.

Unlike fancier bubble-tea brands, Mixue markets itself as cheap and cheerful, rather than trendy, both in China and South-East Asia. Its viral song has been translated into 20 languages and is often played relentlessly in its franchises. "What it took our China team ten or 20 years to figure out, we've been able to perfect in just one year by learning from their experiences," says Mr Hartanto.

Mixue's biggest ambitions for growth are in countries with rapidly growing economies and many young people, such as Indonesia, the Philippines, Thailand and Vietnam. Yet over the past year Mixue stores have also opened in Australia, Japan, Singapore and South Korea, and the firm has registered its trademark in markets from Europe and America to Kyrgyzstan and Uzbekistan. It has announced plans for an initial public offering on the Shenzhen Stock Exchange. The singing snowman is coming your way. ■

Japanese politics

Kishida in the clear

TOKYO

The prime minister survives an electoral test

KISHIDA FUMIO, Japan's prime minister, should not to have to worry about his grip on power. His Liberal Democratic Party (LDP) has ruled with only two brief interruptions since 1955; the main opposition parties are a shambles. After winning a party ballot to head the LDP in late 2021, Mr Kishida led it to a thumping victory in Upper House elections in the summer of 2022. He does not need to face another leadership contest until late 2024 and the next national parliamentary election need not be held until 2025.

And yet, doubts about Mr Kishida's standing have dogged his administration throughout his 18 months in office. They became especially acute late last year, when his approval ratings dipped below 30% after the assassination of Abe Shinzo and subsequent revelations about the LDP's links to the Unification Church, a cult-like group, that had inspired the former prime minister's killer. Party insiders began to grumble about Mr Kishida's leadership. Whispers started circulating that if the LDP stumbled in its next electoral challenge—a quadrennial and nationwide contest for prefectural offices—then Mr Kishida might be ousted, perhaps soon after he is due to host a G7 summit in his hometown of Hiroshima in May.

The results from the first batch of the local elections, held on April 9th, have largely quelled those doubts. The LDP won 51% of seats in prefectural assembly elections. Along with its coalition partner, Komeito, it took six of the nine gubernatorial posts up for grabs. "Voters have recognised our achievements," declared the LDP's election chief, Moriyama Hiroshi. Political analysts now expect a similar triumph on April 23rd in the second round of elections, which includes five special elections for seats in the national parliament. Mr Kishida is "riding high and feeling very confident," says Toshikawa Takao, editor of *Insideline*, a political newsletter.

The LDP's latest electoral success in part reflects an upswing in public attitudes toward Mr Kishida. His approval ratings have steadily ticked upwards, and are now comfortably above 40% in most recent polls. The prime minister's recent trip to Kyiv, the first time a post-war Japanese leader has visited an active conflict zone, proved to be immensely popular. Voters also credited Mr Kishida with patching up relations with South Korea, whose president, Yoon

Suk-yeol, visited Tokyo for a long-awaited summit last month.

Yet the good news for the LDP also masks more troubling signs about the health of Japan's democracy. Voter turnout, which has been steadily falling over the past decade, hit a new low for prefectural assembly elections at 42%. Mainstream challengers to the LDP, such as the Constitutional Democratic Party, successor to the last opposition group to hold power nationally, continued to flounder; the most successful challenger was the Japan Innovation Party, a populist outfit that made inroads beyond its traditional base in Osaka. Japan's shrinking, greying population is also making it hard to find candidates: races in about 40% of electoral districts were uncontested. A lack of competition, rather than great enthusiasm for LDP policies, thus explains a lot of the party's ongoing dominance. "Kishida doesn't have much colour—it's hard to tell what he's thinking or what he wants to do," says Kimura Mariko, who voted for the LDP in elections in Chiba, near Tokyo, all the same.

Nonetheless, Mr Kishida will feel reinvigorated as he heads into the G7 next month. Having dispelled questions about his immediate future, he will be able to engage with his global peers without them wondering if, like so many previous Japanese prime ministers, he will be gone before they have a chance to meet again. Mr Kishida looks well-placed ahead of next year's LDP leadership contest. His next move may be to call for a snap lower-house election, a tactic favoured by the late Abe as a means of reasserting prime ministerial control over his party. On March 29th, Mr Kishida denied rumours that he was already planning such a move. ■

Banyan Rewriting Indian history

Narendra Modi is retrofitting his country's past to control its future

At the start of the academic year this month, 12th-year students of history and politics at tens of thousands of schools across India returned to a syllabus and textbooks that had been significantly altered. Tweaks are good when they reflect new thinking in a discipline or correct blind spots. Those overseen by the National Council of Educational Research and Training do not do that. Rather, they reflect the strident vision of nativism, known as Hindutva, adhered to by the ruling Bharatiya Janata Party (BJP) and its leader, Narendra Modi. Disdaining the actual record, it imagines India as a purely Hindu land.

Consider the abuses of history that flow from this fever dream. It is impossible to understand the Indian story without appreciating the immense role of the Mughal emperors. Invaders from Central Asia, these Muslim dynasts ruled much of India—often illustriously, sometimes with bigotry—from the 16th to the 18th centuries. India's built heritage is thick with Mughal work—think of the Taj Mahal and, perhaps sweetest of all, Humayun's tomb in Delhi. The Mughal administrations employed Hindus in eminent positions. That one-seventh of India's population of 1.4bn is Muslim today is a Mughal legacy. Yet in Mr Modi's new textbooks, chapters on the Mughals have been shortened or scrapped.

Key excisions uncovered by the *Indian Express* newspaper have also been made to the history attending modern India's birth pangs, among them the assassination of Mohandas Gandhi. Textbooks used to teach that "Gandhi's steadfast pursuit of Hindu-Muslim unity provoked Hindu extremists so much that they made several attempts to assassinate [him]." It has been cut. So has a description of Gandhi's assassin, Nathuram Godse, as belonging to the Brahmin caste (an important BJP constituency). Textbooks no longer say Gandhi "was particularly disliked by those who wanted India to become a country for the Hindus, just as Pakistan was for the Muslims." Gone is the fact that the Rashtriya Swayamsevak Sangh (RSS), Hindutva's paramilitary wing, was banned after Gandhi's death.

More recent history also gets a rinse. In 2002 in Gujarat, over 1,000 people died, most of them Muslims, in vicious sectarian violence. Mr Modi was the state's chief minister at the time—and strikingly silent over the activities of Hindu lynch mobs. Students were previously taught that "Instances, like in Gujarat, alert us to the dangers involved in using religious sentiments for political purposes. This poses a threat to democratic politics." This has also been stripped from the latest edition.

The education council's head says the changes are an act of kindness: reducing "content load" for kids who have had a tough time during the pandemic. BJP stalwarts did not get that memo. One, Kapil Mishra, tweeted triumphantly that the Mughal emperors are "not in the history books, they are in the dustbin".

Mr Modi himself had previously complained of a "concocted" historical narrative—all that guff about immigration from Iran and elsewhere at key moments over the millennia and about India as a place of diverse multitudes. In 2017 he established a committee—containing no Muslims, Christians or women—to rewrite India's early history. Its aim, members say, is to prove Hindus are direct descendants of India's very earliest inhabitants and (for why stop there?) that Hinduism's ancient scriptures are not myth but fact. One committee member says that Hindus have been around for millions of years—apparently predating the rest of the human species.

This politicised assault on Indian history is a mirror image, notes Mukul Kesavan, a writer, of next-door Pakistan's attempt to retrofit its past to match an exclusionary present. It may seem as risible as the image, long ridiculed by Indian liberals, of RSS officers strutting about in their erstwhile uniform of khaki shorts, like so many overgrown boy scouts. But it is also, like the RSS, which took inspiration from early 20th-century European fascist movements, extremely dangerous. Hindutva entails above all, as Mr Kesavan puts it, a "ferocious hatred for the Other".

Expunging non-Hindus from Indian history and oppressing them in reality are related consequences of that exclusionary creed. It is lamentable that millions of students will not be taught to understand India as the great and inspiring story of diversity, contestation and accommodation that it is. The increased persecution of non-Hindus that Mr Modi's warped history will invite is more worrying still.

Political education

Cramming Xi Jinping Thought

The president has launched a new campaign to ensure Communist Party members understand his thinking. It will not be fun for bureaucrats

Since Xi Jinping took over as China's leader more than a decade ago, he has kept officials on their toes. Every couple of years, on average, he has subjected them and the rest of the Communist Party's 97m members to "education" campaigns to ensure they grasp the party line (slackers beware). A new one has begun to unfold. For weeks, if not months, it will command the attention of the bureaucracy and the armed forces, as well as many businesspeople, academics and others. The theme, this time, is overtly personal. It is about keeping in step with Mr Xi himself.

It is probably not a response to any perceived new threat to Mr Xi's grip. The timing seems routine. It is roughly two years since the last such campaign, which focused on inculcating a highly sanitised version of the party's history. It is also about six months since the party convened a five-yearly congress, at which Mr Xi appeared to strengthen his power by replacing colleagues with his protégés and securing a norm-breaking third term as party chief. One of those protégés is Cai Qi, who last month was named as Mr Xi's chief of staff. Mr Cai also oversees ideology and propaganda in the Politburo Standing Committee, the seven-member apex of power. He is in charge of the new campaign. This is a chance to impress his boss.

But the scope of this latest campaign is anything but routine. The previous five ones launched by Mr Xi usually emphasised specific aspects of party members' behaviour, such as their obligation to attend to the needs of the "masses", study the party constitution, resist corruption and remember the "original aspiration" of communists. This campaign is branded Xi: it is officially described as "study and implementation of Xi Jinping thought on socialism with Chinese characteristics in the new era". That means party members must master the broad sweep of Mr Xi's thinking on everything from maintaining discipline in the party, to the environment and national security. The new era is party-speak for the age that dawned with Mr Xi's accession as party leader in 2012.

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— Chaguan is away

State media trace the history of Mr Xi's education campaigns back to Mao Zedong's "rectification movement" of the 1940s during the party's days as a guerrilla force. They do not mention that thousands of people were killed in purges that ensued from Mao's attempts to reform party members' thinking. Today's campaigns are far more restrained, but officials still use blood-curdling language to describe the psychological impact they are intended to have. Officials are urged to "turn blades upon themselves" and "scrape the bone to heal poison". They are required to engage in "criticism and self-criticism sessions" that make their "faces turn red and sweat".

In some parts of the bureaucracy the latest campaign is being combined with ongoing purges of corrupt and disloyal officials. One is the discipline-enforcement apparatus, which began a "rectification" campaign within its ranks earlier this year. Another is the government's sports administration, which has been waging war in recent months on corruption in football.

Education campaigns are launched with enormous fanfare. The decision to start this one was formally endorsed by the ruling Politburo on March 30th. It was kicked off by Mr Xi himself at a gathering of officials four days later. He said it would be a "tempering of the mind" and a "spiritual baptism" that would play an important role in unifying party thinking and solving "prominent problems within the party". The term is a euphemism for everything from ideological deviation to disloyalty.

Few details of how the campaign will be implemented—including a target date for completing it—have been revealed. Party committees across the country have been meeting to discuss related directives, but these remain classified. Past such campaigns, however, suggest it will involve a combination of study meetings, field trips and a tool of mind control that Mao would have relished: a web portal-cum-smartphone app that tests users' knowledge of prescribed materials. It is called Xuexi Qiangguo, which means both "Study the Strong Country" and "Study Xi to Make the Country Strong".

Launched in 2019, the app has become the bane of many party members' lives. By noting users' scores and daily usage habits it allows the party's ideological workers quickly to identify those whose minds are not on the task. Boredom with education campaigns is a common problem. A survey in 2019 (published last year) showed that nearly 60% of people at a vocational training college who had taken part in one of Mr Xi's education campaigns felt the theories they were required to study bore no obvious connection to real life, according to Li Fang, an academic in Guangzhou. Much of the teaching material was simply copied from documents supplied by higher-ups.

No faking it

As part of their education, officials will have to think more creatively. They have been told to organise research into "complicated and difficult" problems affecting the new era, such as food security or public health. They must interview people about such matters at society's grassroots, and suggest good remedies. "No going through the motions", they have been warned.

Among party members, many eyes will be on Mr Cai as the chief enforcer of such directives. He ranks fifth in the Politburo but his power is enormous. Not since Mao's day has the party leader's chief of staff (or director of the Central Office, as the job is formally known) served concurrently on the Politburo Standing Committee. The combination of roles will make him a formidable gatekeeper between Mr Xi and other members of the ruling elite.

It is clear from Mr Cai's meteoric rise that Mr Xi trusts him completely. In the 1980s and 1990s the two worked together in the province of Fujian. In 2017 Mr Cai was promoted to party chief of Beijing, without having served in the party's Central Committee (normally a rite of passage for such a job). In his new job as overseer of ideology, he has skills to draw on. Much of his work in Fujian involved internal party affairs. In the 1970s he studied political education there as an undergraduate.

Perhaps distressingly for party members struggling with the Study-Xi app, he showed an early fondness for using digital tools to improve bureaucratic behaviour. While working in Zhejiang province in the 2010s he opened a social-media account that he used in part to castigate wrongdoing by officials. "Openness is a good thing", said one of his most-noticed tweets. He even lamented China's blocking of Facebook. Today, however, few see him as anything but Mr Xi's faithful servant. The only hope that some might possibly cling to is that he may, one day, trim the ponderous 16-character title of Mr Xi's philosophy to just "Xi Jinping Thought". It would save lots of time at meetings. ■

Law and order

What passes for justice

BEIJING

China throws the book at two prominent human-rights lawyers

To understand what China's rulers really care about, look at who they punish. On April 10th, after more than three years in detention, two prominent human-rights lawyers—Ding Jiaxi and Xu Zhiyong—were sentenced to 12 and 14 years in prison, respectively. Their crime, according to prosecutors, was the "subversion of state power". Mr Xu's indictment claims that he was plotting a "colour revolution".

The men's actual offences were trivial. They were arrested for organising a private meeting of around 20 fellow activists in 2019. This was no revolutionary cell. Mr Xu and Mr Ding are part of the "New Citizens' Movement". The loosely organised group calls on Chinese citizens to consider the rights they have under the constitution, such as freedom of speech, and how they are trampled on by the government. In the long run, the movement hopes for a peaceful transition to constitutional democracy. It has also sought to expose official corruption and improve access to education.

Mr Xu has a question for Mr Xi

In 2012, shortly after Xi Jinping became the paramount leader of China, Mr Xu wrote him an open letter. Back then, some thought that Mr Xi might tolerate groups like the New Citizens' Movement. "I hope you show your courage and wisdom to lead China to the right path of democracy and constitutionalism," wrote Mr Xu. "I hope you will be a citizen like us."

But Mr Xu's hopes were soon dashed. In 2013 he and Mr Ding were arrested over protests calling for the state to provide social and educational benefits to migrant workers in Beijing. Mr Xu was sentenced to four years in jail, while Mr Ding received three-and-a-half years. A wider crackdown in 2015 saw some 250 activists and human-rights lawyers detained. Before his most recent arrest, while on the run from police, Mr Xu wrote another open letter to Mr Xi, calling for him to step down.

Mr Xu and Mr Ding claim to have been tortured while in custody. Human Rights Watch, a pressure group, has called their sentences "cruelly farcical". What makes them even more so is the relatively lenient sentence given three days earlier to one of China's most infamous criminals. Dong Zhimin bought a woman called Xiaohuamei from human traffickers in 1998. Over the next two decades he abused her. Xiaohuamei gave birth to eight children during this time. In 2022 she was discovered chained by the neck in a shed. A video of her went viral. On April 7th Mr Dong was sentenced to nine years in jail.

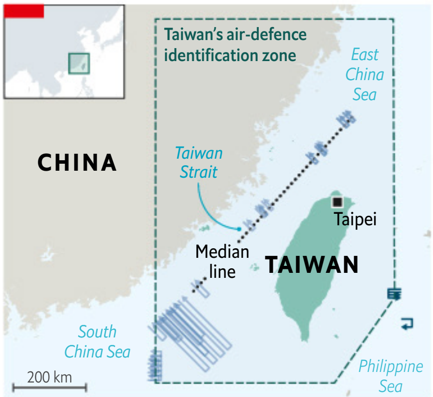
The Communist Party is much more concerned about political crimes. Some of those who protested against the government's zero-covid policy last November remain in detention (though the policy itself was scrapped in December). They could face up to five years in prison for "picking quarrels and provoking trouble", a vague offence often used by the authorities to criminalise peaceful protests and dissent. In February a tech and political blogger called Ruan Xiaohuan was sentenced to seven years in prison for "inciting subversion of state power".

Much of the police and judicial activity in politically charged cases happens in secret. The closed-door trials of Mr Xu and Mr Ding took all of two days last June. Mr Xu was probably not allowed to make a statement to the court during his sentencing. But he dictated one, to be released by his lawyers. In it he asks, "Why is it subversion to aspire to be real citizens?" ■

China and Taiwan

Moderate exercises

What to make of China's military drills around Taiwan



Flight paths of Chinese military aircraft
April 8th-11th 2023
→ J-15 fighter jet → Other aircraft
Source: Taiwan Ministry of National Defence

RESTRAINT MAY not be the first word that springs to mind when Chinese warplanes and naval ships simulate an attack on Taiwan. But the three days of drills that ended on April 10th were on the milder end of the spectrum of China's potential responses to a meeting between Taiwan's president, Tsai Ing-wen, and the speaker of America's House of Representatives, Kevin McCarthy, in California on April 5th. Most important, China did not fire missiles over or around Taiwan, as it did after the previous speaker, Nancy Pelosi, visited the self-governing island in August.

China's reaction thus far appears to reflect a renewed focus on diplomacy, especially with European governments, to offset its widening fissure with America. It may also signal concerns about inflaming public opinion in Taiwan ahead of its presidential election in 2024, which Chinese officials hope will lead to friendlier ties with the mainland. Even so, the drills included several new indicators of how China could try to take the island by force. And there were fresh signals, too, about how America and its allies might respond.

One surprise was the involvement for the first time in such drills of a Chinese aircraft-carrier, the *Shandong*. While other Chinese forces approached Taiwan from its north, south and west, the *Shandong* was deployed around 320km to the east, serving as a platform for J-15 fighter jets to probe the island's air-defence identification zone. Taiwan said that it tracked 19 of those fighters, with several making such incursions, between April 9th and 10th.

Chinese military experts said that the aim of the drills was to practise pre-invasion strikes on high-value targets, and that the *Shandong* could be used to deter foreign forces and hit military assets on Taiwan's east coast, which is protected by a mountain range. Completion of more Chinese carriers in the coming years would create "a stronger siege and strike potential", said Senior Colonel Zhao Xiaozhuo of China's Academy of Military Sciences.

China currently has two operational carriers and some experts are sceptical about their utility in a war over Taiwan. They would be soft targets for America if venturing east of the island and would not provide much additional capability closer to China's shores, as aircraft can reach Taiwan from mainland bases. China also has little experience of operating carriers, having launched its first—based on an old Soviet hull bought from Ukraine—in 2012.

Still, the *Shandong*'s deployment suggests progress in practising carrier operations. As a symbol of military might, its appearance "is a form of coercion and political warfare", says Drew Thompson, a former Pentagon official. China's carriers could also be effective if it imposes a partial blockade or takes other action short of war, making it harder to justify American intervention. A larger Chinese carrier should be operational by 2024 and two more could be ready by 2031.

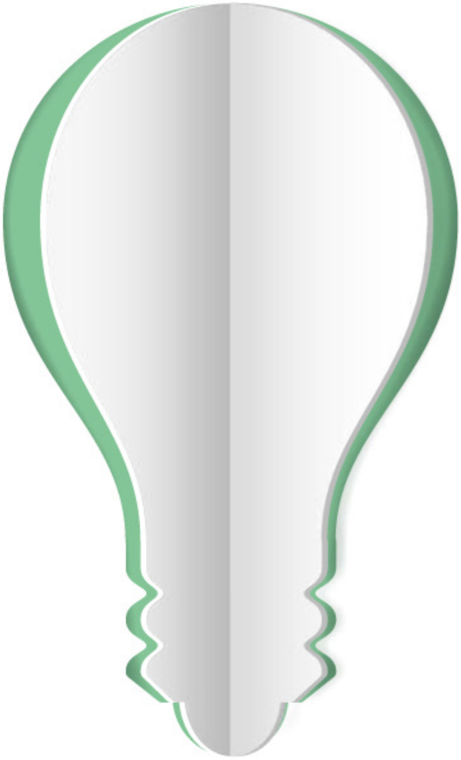
Also of note was that Japan played an unusually active role in monitoring the *Shandong*. Japan's Self-Defence Forces dispatched two destroyers and scrambled fighter jets to gather intelligence on the carrier and other Chinese navy ships escorting it. They observed about 120 take-offs and landings from the carrier, including 80 by fighter jets and 40 by helicopters, according to Japan's defence ministry. It published photographs of the vessel, as well as a map showing its movements.

Japan, America's closest Asian ally, has deployed military assets to monitor Chinese drills before, but this was one of its most robust responses. That is probably an indication of closer co-ordination between America and Japan in preparing for a war over Taiwan. It may also signal America's desire to avoid a confrontation between its own forces and China's during such drills. An American carrier, the *Nimitz*, was nearby too, but no public statement was made about it monitoring the exercises.

America has instead highlighted efforts to galvanise Asian alliances. Shortly before the Chinese drills, the *Nimitz* did exercises with South Korean and Japanese forces. On April 11th America began its biggest ever exercises with the Philippines, featuring live-fire drills at sea for the first time. In February America gained access to four additional bases in the Philippines, which Pentagon planners hope could be used as a launch-pad to help defend Taiwan.

Among America's European allies, meanwhile, there are signs of disunity over Taiwan. In an interview published after a three-day visit to China, French President Emmanuel Macron suggested that Europe should not follow America's lead on Taiwan, lest it be swept into "crises that are not ours". Yet in the midst of China's drills, a French frigate sailed through the Taiwan Strait. China, which often protests such transits, kept quiet. Still, it is not easing pressure on Taiwan. Since the drills ended, it has resumed daily patrols nearby. ■

Have we gone over the line yet?



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TWO SIDES

Middle East & Africa

Israel and the Palestinians

Eclipsed by radical militants

RAMALLAH

The Palestinian Authority is becoming irrelevant after the failed peace process. Surprisingly, most Palestinians are rather pleased

THE MUSLIM holy month of Ramadan and the Jewish holiday of Passover, which coincide this year, ought to be a time when two of the three Abrahamic religions reflect on their common beliefs and shared destiny in the Holy Land. Instead, the conflict between Israelis and Palestinians is at risk of a dangerous escalation.

In just five days from April 5th Israel was hit by rockets launched from Gaza, Lebanon and Syria. The ostensible trigger was clashes between Palestinians and Israeli police forces who had entered the al-Aqsa mosque in Jerusalem, one of Islam's holiest sites. Videos showed police beating people inside the mosque, while young Palestinians shot fireworks at them.

In all this, one actor is noticeably absent: the Palestinian Authority (PA), which was set up under the Oslo accords almost 30 years ago as an interim administration to lead the Palestinians into statehood. Now the body headed by Mahmoud Abbas, 87, is becoming irrelevant as the last vestige of a moribund peace process. Undemocratic, ineffectual and mired in corruption, it is losing touch with Palestinians.

This was laid bare last year when Palestinian security forces arrested Musaab Shtayyeh, a low-level Hamas financier, in the West Bank city of Nablus. The arrest sparked a day of violence in Nablus, as local armed groups rioted, demanding his release from Palestinian custody. They clashed, not with Israeli soldiers, but with Palestinian security forces.

From the outset the PA's legitimacy rested on it being a partner in a peace process that was meant to create a Palestinian state alongside a Jewish one. But with talks frozen for decades, the PA faces an existential crisis. A study last month by a leading Palestinian pollster, Khalil Shikaki, found for the first time that a majority of Palestinians (52%) said the PA's collapse or dissolution was in their interest.

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There are several reasons why Palestinians are losing faith in the PA, but a key one is that it looks hapless in response to the continued construction of Israeli settlements on Palestinian territory. Moreover, the PA has also been unable to protect Palestinians from violence inflicted on them by Israeli settlers, who rampage from time to time through Palestinian towns and fields, beating people and destroying their orchards and vines. This violence has only increased since Binyamin Netanyahu returned to office as Israel's prime minister in December with the backing of right-wing parties, including those led by Jewish supremacists. The PA's authority is further undermined when Israel carries out bloody raids in Area A, which largely comprises Palestinian cities under the control of the Palestinian security forces.

Since the collapse of the peace process, many Palestinians have begun to reconcile themselves to the PA morphing from the harbinger of an independent state into something of a glorified municipality that merely provides basic services. Now it is failing even in that role. Public services are paralysed by strikes over unpaid wages. Schools in the West Bank have barely been running since 20,000 teachers went on strike in early February. Hospitals are short of key medicines. "The PA cannot honour its obligations," says Raja Al Khalidi of the Palestine Economic Policy Research Institute in Ramallah, the Palestinians' administrative capital. "That's a form of collapse [even if] it's not a physical collapse."

Prickly Palestinian officials argue that Israel's occupation of the West Bank makes it almost impossible for them to govern. They are also short of cash, not least because Israel has withheld some 4bn shekels ($1.1bn) in customs revenues that it collects on the PA's behalf. Israel says this is because the PA is not keeping its side of the deal by maintaining security. It is also furious that the PA makes payments to the families of those killed carrying out attacks on Israelis, many of them civilians. Yet the issue goes beyond money. "It's not just about salaries," says Youssef Joha, a leader of the teachers' strike. "There's an issue of trust with the PA."

The PA's budget troubles and crumbling administrative capacity are affecting its security services too. A senior officer says at any time some 2,500 of the force's 83,000 members fail to turn up because they are supplementing their salaries with jobs in construction or hospitality in Israel. This is because a major-general in the Palestinian security forces has a salary of just 12,160 shekels a month, while a private would get just 1,900 shekels. By contrast, a Palestinian doing manual labour in Israel can earn at least 6,000 shekels a month.

In recent months the PA has largely lost control of security in the West Bank's main cities such as Jenin and Nablus, where armed groups have emerged, such as the Lions' Den. These are thought to be responsible for attacks against Israeli targets in the West Bank, including against civilians.

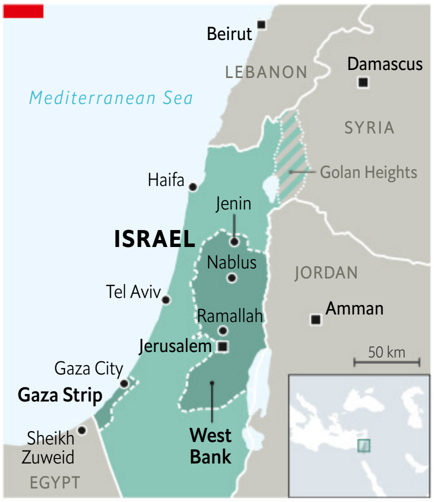
Though the PA has come under international pressure to regain control of Nablus and Jenin, it is in a bind. If it sends in the troops, as it did last year in the case of Mr Shtayyeh, it will be further delegitimised in the eyes of Palestinians. Yet if it holds back, Israeli forces are more likely to intervene, often with deadly results.

Its crisis of legitimacy is not helped by its undemocratic ways. The last time Palestinians got to vote for members of the legislative council was in 2006. Mr Abbas, who was elected president in 2005, is in the 19th year of a four-year term. He shows no desire to leave his presidential palace, which polls suggest would happen if he were to put his name on the ballot. In 2021 Mr Abbas cancelled legislative elections after polls indicated his Fatah party faced defeat. Many Palestinians glumly accept that there will be no elections until he dies.

International donors are frustrated by the PA's lack of democracy, transparency and legitimacy. "There has been a tightening of the screws," says a European diplomat, noting that foreign aid increasingly goes to NGOs or directly to hospitals. "We barely deal with the PA any more."

Most older Palestinians oppose the resumption of an armed struggle because they do not want a repeat of the second intifada, or uprising, which claimed more than 3,000 Palestinian and 1,000 Israeli lives between 2000 and 2005. Yet attitudes are changing. A poll issued last month by Mr Shikaki found that 54% of Palestinians thought violence was the best way to end Israel's occupation; 68% favoured forming armed groups such as the Lions' Den, which the PA does not control.

Mr Abbas and the PA must shoulder much of the blame for the authority's predicament. But Israel, which relies a great deal on its co-operation in security, has done much to weaken the PA. Were it to disintegrate further, it would leave a vacuum that would probably be filled by violent factions that have given up entirely on the peace process. As deeply flawed as the PA is, many may come to rue its passing. ■



Egypt's army enterprises

Of militants and money-changers

DUBAI

Egypt's army seems to want to make pasta as well as war

The war was not going well. The enemy had made three major advances in barely a year. The population was demoralised. Abdel-Fattah al-Sisi needed to show leadership. His motorcade zipped across a desolate landscape until it reached an army checkpoint, where Egypt's president sought to rally the troops. "Don't think this crisis will remain," he told a clutch of camouflage-clad conscripts. "A day will come, and this crisis will become history."

The tone and ambience were martial. But the enemy, in this case, was not rebels or invaders: it was the dollar, against which the Egyptian pound has lately lost almost half its value. Mr Sisi was not urging the troops to fight harder but rather exhorting them, and the rest of his 105m subjects, to endure a grinding economic crisis. It was a curious scene that says much about the past decade of his rule.

His visit on April 1st to the Sinai peninsula, a vast moonscape that is home to less than 1% of Egypt's population, was also a declaration of victory. The area's Bedouin natives had been marginalised for decades, barred from decent jobs and pushed off their lands. Some took up arms after the overthrow in 2011 of Hosni Mubarak, the longtime dictator. In 2014 they linked up with the jihadists of Islamic State. The following year they briefly took over the town of Sheikh Zuweid, on the coast (see map).

The army struggled to quash the insurgency with a scorched-earth strategy that worsened local grievances. Human Rights Watch, a New York-based monitor, said that in 2013-20 it destroyed at least 12,000 buildings and razed 6,000 hectares of farmland. Perhaps one-quarter of North Sinai's 450,000 people were displaced.

The turning-point came only when local tribes entered the fray. After years of being kidnapped, extorted and killed, they started working alongside the army to secure Sinai. The region is calmer today, though in December militants claimed responsibility for a raid on a checkpoint in the city of Ismailia, their first attack on the Egyptian mainland in three years.

That was the backdrop to Mr Sisi's visit. Terrorism, he said, was all but defeated in Egypt. There would soon be grand celebrations, and perhaps a museum to commemorate the army's sacrifice. "Terrorism," Mr Sisi told his troops, "ended with you."

Mr Sisi is fond of invoking the memory of Egypt's post-revolutionary chaos to justify his autocratic rule. As the economy sinks, though, many of his subjects have soured on him. After investors pulled out capital last year, Egypt has had to devalue its currency by almost 50% since March 2022. The central bank has almost doubled interest rates over the period, including its most recent increase of two percentage points (to 18.25%) on March 30th.

Investors are still wary. The pound seems to have further to fall: on the black market, it trades some 16% below the official peg. Interest rates remain dwarfed by inflation, which hit an annual rate of 32.7% last month. The price of food and drink rose by 62.9% from a year earlier.

With real rates deeply negative, investors have little appetite for Egyptian debt. On April 3rd the government sold only 1.1m pounds ($35,275) in bonds at an auction, just 0.04% of the 3bn-pounds-worth on offer: would-be buyers wanted much higher rates than the state was willing to provide.

The government reached a $3bn deal with the IMF in December. Its commitments to the fund include a pledge to shrink the army's economic empire, which crowds out private business. The men in khaki manufacture pasta and cement, build roads and bridges and produce television shows. Yezid Sayigh, a fellow at the Carnegie Middle East Centre, a think-tank in Beirut, estimated in 2019 that the army oversees a quarter of public spending on housing and infrastructure.

Egypt is not keeping its promise. The National Service Projects Organisation (NSPO), a military-owned firm, is building new factories to make fertilisers, irrigation machines and veterinary vaccines. An army-linked company recently won a contract to renovate the Cairo zoo.

The government has talked for two years about selling stakes in Safi, a bottled-water company, and Wataniya, which operates petrol stations. Both are run by the army. Officials said this month they had received offers for each of them. Even this step, though, may be less significant than it seems. A visitor to Cairo in recent months might have noticed a growing number of Wataniya franchises rebranded as ChillOut stations, which offer retail and fast food along with petrol. Wataniya and ChillOut are both subsidiaries of NSPO. The army looks to be stripping assets from a firm it might sell and transferring them to one it will keep, which is presumably not what the IMF had in mind.

Both Egyptian officers and foreign observers say the Sinai campaign exposed real weaknesses within the army. Waves of poorly trained conscripts were shipped to the front, sometimes without basic equipment; hundreds returned home in coffins. After a decade of Mr Sisi in charge, the army still struggles with its core task of securing the country—even as it pursues an ever-expanding campaign to seize control of the economy. ■

Café
THE MILITANT

A working lunch

Africa's missing people

The disappeared

YOLA

The Red Cross tries hard to find them

When the jihadists of Boko Haram attacked Lydia Adamu's village in north-east Nigeria in 2015, her parents and their six children fled—with nothing. At first they seemed relatively lucky, reaching the safety of Yola, a city hundreds of kilometres to the south. When word came that their village was quiet, her parents ventured back to salvage a few belongings. What happened next is murky. All Ms Adamu knows is that "armed men came again, shooting. They seized my parents on motorbikes and disappeared." She has never seen them again and has no idea if they are dead or alive.

Her parents are among some 24,000 missing people in Nigeria registered by the International Committee of the Red Cross (ICRC), a global NGO. That is a tiny fraction of the true number in Nigeria, says Anne-Sofie Stockman of the ICRC in Abuja, the capital. Short of cash, the committee focuses on the north-east, where the jihadists roam freely across swathes of territory. Yet the ranks of the missing are swelling elsewhere in Nigeria, because of kidnappers, separatists and clashes between farmers and herders. Even in the north-east, countless cases are never registered.

Across Africa the ICRC has registered some 71,000 people as missing; here, too, the true number must be far bigger. Perhaps 40% of them are children. "If one person is missing, you can imagine the number of family members that are traumatised," says Joshua Audu, whose brother-in-law was last seen brushing his teeth moments before jihadists overran Mubi, a market town in the north-east, in 2015.

Not knowing if loved ones are alive is excruciating. Ms Adamu, softly-spoken and shy, was in her twenties when her parents were taken. Suddenly she had to look after five distraught siblings. The youngest, only five at the time, "kept on asking where his parents are".

Those left behind often become destitute, especially if the breadwinner has gone missing. In Nigeria there is no legal definition of a missing person. After seven years the family can apply to the high court to declare a person presumed dead. Until then, his or her bank account, pension and inheritance cannot be touched. Land may not be divided up or sold. Spouses cannot get a divorce or remarry.

A few African countries such as Burkina Faso, Ivory Coast and Senegal can legally declare a person as missing, though it can take several years. But almost all African countries lack the legal protections of countries such as Colombia, where there is a national registry of missing people, a commission to search for them and state support for those left behind.

The pain of not knowing

In Nigeria NGOs try to plug the gaps. Mr Audu and Ms Adamu took part in an ICRC programme that provides mental-health support, guidance on legal troubles and help with finance. "It has healed my trauma," says Mr Audu. "I've been able to draw a line now, to say I can start again."

The ICRC also tries to find the missing. If they have a lead, they send volunteers to knock on doors, asking questions. In cold cases they go to communities near where people who went missing were last seen and read out lists of their names. Yet for 80% of the cases registered in Yola it is still too dangerous to visit.

Reunifications are rare. There were only 15 last year in Nigeria. "Today brings more joy to me and my wife than the day he was born," says the father of a 15-year-old reunited with his family in February. The boy had been missing for more than a decade. He fled across the border into Cameroon, aged five, after jihadists attacked his uncle's village where he had been attending a religious school. His uncle was killed.

The boy was reunited with his parents only five months after he contacted the ICRC, which is unusually fast, partly because he could remember enough to draw a map showing their house. Few young children can do that. "When you ask them what's the name of your mum, they will tell you we call her mama," Fatima Halilu Ibrahim of the ICRC in Yola sadly explains.

The ICRC cannot do it all. Mr Audu has been campaigning in Yola and Abuja for the authorities to step up. "But nobody came to us except the Red Cross." ■

Inequality in Africa

All right for some

KAMPALA

Africa is one of the most unequal continents in the world

“NIGHT AND day my heart is bleeding,” sings the Zimbabwean artiste Winky D on his new album. “When I look at the poor and needy, everything gone with the greedy.” It seems the authorities do not share his concern. Last month the police stormed the stage mid-performance and shut down his gig.

Singers sometimes do a better job of chronicling African inequality than economists. With patchy data, measures of income distribution have long been little more than guesswork. But researchers are starting to peer through the statistical fog and uncover new evidence about inequality—past and present. They describe a continent that is staggeringly unequal in some parts and far less so in others.

Most data come from household surveys, which tend to play down the extent of inequality. One reason is because questionnaires often ask people how much they consume, rather than how much they earn—and the rich rarely spend all their income. Another is that top-earners are less likely to be sampled. Some surveys in Ivory Coast, for instance, leave out French and Lebanese residents entirely.

In a newly published paper, Amory Gethin and his colleagues at the Paris School of Economics contrast evidence on income and consumption, cross-check survey responses with tax records, then adjust the raw numbers accordingly. Their method applies big assumptions to sparse data, but makes it easier to compare Africa with other continents. If their estimates are right, then the pre-tax income of the top tenth of Africans is 54% of national income. For the bottom half it is just 9%. The ratio between the two is larger in Africa than any other region in the world.

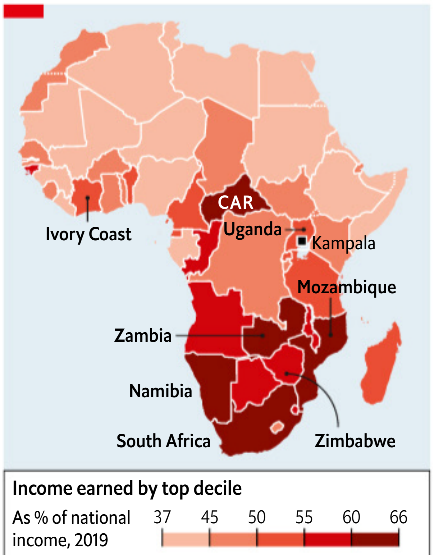
Just as striking are the differences between African countries (see map). Southern Africa, where the richest tenth gobble 65% of the cake, is in a league of its own. Inequality tapers off in western and northern parts of the continent, where the lucky few get a 45% share. In those places, the income distribution looks more like America than Brazil. They are still unequal, but hardly global outliers.

This diversity emerges from a convoluted history, argues a new paper by Ewout Frankema and Michiel de Haas, both of Wageningen University, and Marlous van Waijenburg of Harvard. They argue there have been three waves of rising and falling inequality in Africa, each characterised by different ways of accumulating wealth. The first, beginning in the 17th century, was built upon slavery and the control of trading routes. A warrior class profited by selling their fellow Africans to European and Arab traders.

The second wave washed in during the 19th century, as European countries colonised much of Africa. In general, the most unequal countries were those with the most settlers. In southern Africa, racist regimes stole vast tracts of land and imposed white-minority rule. Inequality also rose in places where the production of new commodities required a great deal of capital, such as the deep gold mines in South Africa, or was based on plantations.

The three authors argue that the third wave runs from the 1950s to the present day. After independence some governments grabbed the assets of their country’s Asian and white minorities, redistributed land or established socialism, often with disastrous effects on growth. Then in the 1980s more countries began to turn to the free market in the pursuit of growth and prodded on by the World Bank and the IMF. But a commodity crash reduced the money available for redistributive policies. Liberalisation was often blown off course by corruption as privatised businesses or oil revenues were snaffled by insiders.

Curiously, this latest wave does not show up in household surveys, which find no consistent trends in inequality within countries since 1990. One possibility is that policies that tend to increase inequality were offset by equalising forces, such as abolishing price controls that kept farmers poor. Some academics argue that the era of free capital flows has made it easier for tycoons to stow money away in tax havens, where the income it generates is hidden. By one estimate, as much as 30% of Africa’s financial wealth is held offshore.



Income earned by top decile

As % of national income, 2019

Source: “Income inequality in Africa, 1990–2019: Measurement, patterns, determinants”, by Gethin et al., *World Development*, 2023

Development economists have generally been more concerned with poverty than inequality: feeding the poor is often more urgent than counting yachts. But many are now realising that distribution matters, too. Although economic growth is the best way to reduce poverty, its power is dampened in those African countries where inequality is high, reckons Augustin Fosu of the University of Ghana.

My friends all drive Porsches

African governments have, for the most part, avoided interstate war. With little need for mass mobilisation, ruling elites have rarely had to make the kind of grand bargains with citizens that built redistributive states elsewhere. On average, African governments collect taxes worth just 16% of GDP. About half of that comes from levies on goods and services, which fall on rich and poor alike. Politicians are often trying to squeeze more tax out of small businesses even as they grant waivers to multinational companies to encourage investment, notes Ayodele Odusola, an economist at the UN Development Programme.

Informal money flows can redistribute wealth. Urban workers send money back to the village; the devout give alms to the needy; politicians hand out jobs and money to networks of allies. In low-income countries this kind of support makes a much bigger dent in poverty than do state-run programmes of social assistance, according to researchers at ODI, a think-tank in London. But the impact on inequality is muted because the rich get larger private transfers than the poor.

Norms of sharing and social views may be evolving. In many African societies there was a pervasive belief that wealth comes from supernatural sources, says Ebenezer Obadare, a sociologist at the Council on Foreign Relations, an American think-tank. Those beliefs have sometimes kept inequality in check, by implying that the rich have become so through conniving with sinister forces. But the spread of Pentecostalism and its “prosperity gospel” has turned money into a blessing from God, giving divine sanction to income gaps. Sauti Sol, a Kenyan band, sings of believers squashed into shared taxis while pastors ride in BMWs. Sometimes a catchy lyric says more than a statistic ever can. ■

Europe

A chat with Ursula von der Leyen

The woman at the heart of Europe

BRUSSELS

The president of the European Commission is battling to unite the European Union on China, Russia and much more

Just days after Ursula von der Leyen returned from a controversial visit to China on April 7th, she had been due to fly to South America to nudge a trade deal along. In a small act of mercy, the meeting with the Brazilian president has had to be postponed. She probably needs the breather. In the past four months her diary has included a visit to President Joe Biden in Washington, an address to the Canadian parliament, tea with King Charles, a guest appearance at a German cabinet meeting, repeat summits of the EU's 27 national heads in Brussels and trips to see the leaders of Britain, Estonia, France, Italy, Norway, Sweden and Ukraine. Next month she will jet off to attend the G7 summit in Japan.

These jaunts are no grandstanding indulgence. The EU is in the midst of upheaval. War in Europe has forced a recasting of its six-decade peace project. Mrs von der Leyen is shaping the response to the challenges buffeting the EU, from missing Russian gas to anaemic defence spending. Its economy, only just out of covid-19, is on a new set of tracks, the better to counter America's protectionist green subsidies, lessen its over-reliance on China and deal with the imperatives of climate change.

Previous crises, such as the euro-zone miasma a decade ago, had threatened to tear the EU apart. A growing debate over how to handle China is the latest source of stress. But facing the covid pandemic, then Russia's war, has created a new sense of common purpose. Europe has rallied around its blue-and-gold-star EU flag, a row of which flutter outside the commission's headquarters in Brussels. In her cavernous office on its 13th floor, Mrs von der Leyen tells *The Economist*: "We've shown this unity because we've understood from the very beginning that this Russian war in Ukraine will change Europe."

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46 Charlemagne: The polluted continent

Her appointment in 2019 had come as a surprise. A longtime ally of Angela Merkel, the former centre-right chancellor, she had survived rather than thrived in the tricky defence brief for five years. The top job in Brussels suited the multilingual Mrs von der Leyen: she grew up in Brussels, her father having been a senior EU official in the bloc's formative years. "I'm very much born European," she says.

Three quirks amused Eurocrats in her early days. The first was Mrs von der Leyen's unusual path to power—she studied economics before becoming a medical doctor, then juggled a political career and seven children. The second was her decision to turn part of her Brussels office into a studio to live in, to cram in long days and nights of work (some predecessors had been less diligent). The third was a habit of describing herself from the outset as heading a "geopolitical" commission. Running the EU's 32,000-strong executive in Brussels is more often the stuff of grinding technocracy, not high politics.

Yet discreetly, under her leadership, the political fabric of the continent has been rewoven, with far more power flowing to the commission she heads. Covid-19, which hit soon after she took office in 2019, provided an early challenge. Mrs von der Leyen fought to keep barriers between EU countries from re-emerging. Her staff was put in charge by national governments of procuring vaccines for 447m Europeans—a task it was ill-prepared for, and pulled off only after costly initial delays.

The 64-year-old speaks of the commission having "to grab the opportunity and to show leadership". One example was a €750bn ($820bn) pandemic recovery fund, a federalising leap. Cleverly, the money can be disbursed only according to priorities set in Brussels—which has used the fund to bludgeon countries felt to fall short of EU rules. Poland and Hungary, who are deemed to have hobbled their judiciaries, have still not seen any cash.

War catalysed further changes. The EU responded to the invasion of Ukraine by orchestrating ten rounds of sanctions against Vladimir Putin's regime, and has delivered €38bn in financial assistance. It has even paid for some €3.6bn-worth of arms, once very much a taboo. The cutting off of Russian gas that ensued raised questions about Europe's reliance on the outside world. Mrs von der Leyen speaks of "resilience"—a concept not too far removed from the "strategic autonomy" preferred by France's Emmanuel Macron, with whom she has just travelled to China.

That trip provided an illustration of the tricky power dynamics in Europe, where national leaders still hold sway. Just before the visit Mrs von der Leyen had warned in a hawkish speech that "China has now turned the page on the era of 'reform and opening' and is moving into a new era of security and control". Officials in Beijing made sure she played second fiddle to the far more doveish French president, granting her much less face-time with President Xi Jinping. Those looking for divisions in the EU's approach to China found it easy. Mr Macron then made matters worse by telling reporters he thought Europe ought not to become a "follower" of America's in the event of a crisis over Taiwan.

The heavier burden

Whether keeping its lights on, developing weapons or building electric cars, Europe increasingly wants to stand on its own two feet. EU rules that had kept its economies among the most open in the world are thus out of favour. A new economic model with a far bigger role for the state—including the Brussels bureaucracy—is now emerging. In part that is a result of the only aspect of her original agenda to have survived contact with events: Europe is on track to reduce carbon emissions by 55% from 1990 levels by 2030, and has a plausible chance of reaching net zero by 2050.

What might come next? Mrs von der Leyen's five-year term ends in 2024. She has her critics, who accuse her of centralising power in a small team of aides. Others gripe that she merely channels the collective interest of the bloc's national governments, rather than pursuing some higher European ideal. Perhaps for that reason most countries seem minded to give her a second term. But the arcane process for divvying up top EU jobs (they will be decided after the European elections in spring 2024) could trip her up. Rumours she could end up as the head of NATO, also based in Brussels, are probably just that. Asked about her intentions, she yields nothing beyond a seasoned politico's wry smile.

The twin tragedies of covid-19 and war were freakishly suited to a doctor-turned-defence minister. But it was a challenge that could easily have been fumbled, and it has not been. Keeping Europe united is "a constant work in progress", she says. It is the source of the EU's unexpectedly strong influence in recent times—and of her own. "It's something...you have to work for day after day after day." ■

Turkey's earthquake and the election

The ground beneath his feet

NURDAGI

Recep Tayyip Erdogan is running out of time to rebuild

Along a road that snakes through the pine-covered hills north of Nurdagi, one of the towns devastated by the earthquake that struck Turkey in early February, bulldozers claw into the ground, clearing the way for new public housing. Once completed, the homes will accommodate some 450 displaced families. But much more will be needed. The tremors brought down over a thousand buildings across Nurdagi. The remainder are too damaged to remain standing. Not a single one of the larger buildings is safe, says a local official. Before it can rise again, the town as a whole, home to 40,000 people on the eve of the quake, will have to be torn down.

A work in progress

"We will rebuild from the ground up," Turkey's president, Recep Tayyip Erdogan, pledged when he toured the disaster zone in February. "Give us a year." Two months later, a fair share of the 200m tonnes of rubble that covered the area has been removed, and construction has begun on the outskirts of some towns, a drive across the region reveals. But the looming challenge is more daunting than Mr Erdogan suggests. Assuming he survives the coming presidential elections, scheduled for May 14th, Turkey's leader will need much more than a year, and plenty of outside assistance, to make good on his promise.

Across 110,000 square kilometres, an area roughly the size of Bulgaria, over 300,000 buildings have been destroyed, damaged beyond repair, or are slated for demolition. More than 50,000 people are dead, and another 3m have been displaced. A recent report by Turkey's strategy-and-budget office puts the cost of reconstruction at $104bn, or 11% of GDP, and predicts the disaster will shave at least one percentage point off the growth rate this year.

No one considers Mr Erdogan's timetable realistic. The number of houses that need to be built exceeds the number of housing permits issued across all of Turkey last year, says Burcu Aydin Ozudogru, a researcher at TEPAV, a think-tank. In places like Antakya, a city of 400,000, now mostly emptied of residents and populated instead by destroyed homes and heavy machinery, the clean-up alone will take another six months, reckons Mustafa Ozcelik, head of the local chamber of architects. Only about half of the rubble has been cleared. Much of the old city remains impenetrable, even on foot, with streets and alleyways choked by debris. Reconstruction will need up to five years, analysts say.

Reconstruction costs will widen the budget deficit, which looked set to reach 3.5% of GDP this year even before the earthquake, by at least a couple of percentage points. Mitigating the impact of future disasters, especially in Istanbul, where the risk of a big quake is alarmingly high, will require yet more spending. Quake-proofing the city's ageing housing stock, especially the 90,000 buildings most at risk of collapse, could cost upwards of $19bn, reckons the mayor, Ekrem Imamoglu.

Much of the money for reconstruction will have to come from abroad. The EU and other foreign donors have pledged about $7.6bn, on top of $1.6bn in loans from the European Bank for Reconstruction and Development and $1.8bn from the World

Bank. But for a government that has scared away foreign investors by dismantling the central bank's independence, slashing interest rates in the face of galloping inflation and burning through its foreign reserves to control the exchange rate, coming up with additional financing will be costly and hard. Turkey can still borrow on international markets, but at a high price. Foreign investors can get yields of above 9% on dollar-denominated Turkish bonds.

Mr Erdogan could choose to try and squeeze some money out of domestic lenders. Over the past year, the government has forced Turkish banks to buy treasury securities at laughably low rates. It can do so again to help foot the bill for reconstruction. That would leave banks badly overstretched, however, and cover only a fraction of the government's needs. "We need external financing," says Kamil Yilmaz of Koc University. "But with the current policies in place, this cannot happen."

Mr Erdogan has a month before voters decide whether to entrust him with the construction effort. He must be feeling the pressure. In late March, he presided over what was billed as a groundbreaking ceremony for a new hospital outside Antakya. It later turned out that the tender for the hospital had not yet taken place. ■

Southern Europe's winter drought

Not waterproof

MADRID, ROME AND VALLON-PONT-D'ARC

After Russia cut off its CH_4 Europe's latest shortage is of H_2O

The small town of Vallon-Pont-d'Arc in southern France sits on the winding Ardèche river, just before it enters a deep limestone gorge. Fringed by red-tiled two-storey new-build homes, it has a gently growing population, which is boosted in the summer months by an influx of tourists and their kayaks. After yet another period of low rain, however, concern about dwindling water supplies has prompted Thierry Devimeux, the local prefect, to limit not just the use of water, but the expansion of the town altogether. It makes Vallon-Pont-d'Arc the 22nd *commune* in the surrounding *département* in which all new building has been banned.

Southern Europe is experiencing its second major drought in less than a year. This time it is an unusual one: a winter drought. For 32 consecutive days in January and February no rain fell anywhere in France—the longest dry spell in winter since monitoring began in 1959.

In Italy the areas on either side of the river Po, which is carrying 61% less water than usual at this time of year, account for about a third of the country's agricultural output. Skiers have found that the snow cover in the Alps this season has been even patchier than in the already disappointing previous one, with Switzerland reporting record snow lows on many of its slopes.

The Alps are Europe's water-tower. They provide 25-50% of the water running through the continent's main rivers, the Danube, the Po, the Rhine and the Rhône. With so little snow to melt in the coming months, river levels are likely to be unusually low, and with them water supplies for the people and plants along their banks. Politicians realise the danger. On March 30th Emmanuel Macron, France's president, chose to make his first visit outside Paris after recent protests against his pension reform to a depleted reservoir, the country's biggest, in south-east France. There he unveiled a 53-point plan to save 10% of water consumption by 2030.

On April 6th Italy's cabinet set up a crisis group to frame an emergency programme of action and gave it 30 days in which to report back. The country's water networks certainly need a lot of work. Last month, the Italian environment minister, Gilberto Pichetto Fratin, said that pipeline leakage averages a whopping 37% nationwide; he called it "a waste we can no longer afford". In the province of Belluno in the north-east, 70% of the water, collected from springs, is lost on the way to consumers. Farmers in the north are already planning to plant less rice, which requires more water than other crops.

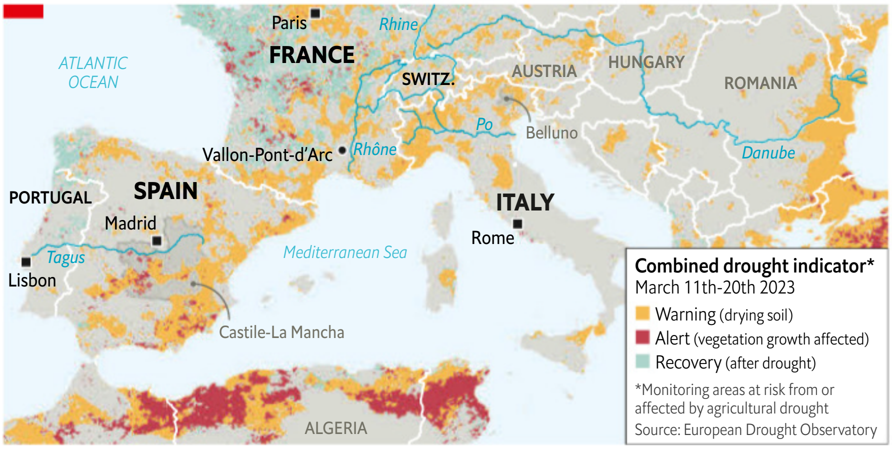
Spain's history has taught it some hard lessons in water management. The country is both high and dry, and has experienced drought throughout its recorded history. Researchers have dated the country's dry spells by noting in which years Muslim caliphs in al-Andalus and bishops in Christian Spain instructed clergy and the faithful to pray for rain. The country's familiarity with the scourge of drought has led it to prepare better. During the reign of Spain's dictator Francisco Franco (1939-1975) reservoir storage was expanded (with what many Spaniards remember as brutal efficiency) by a factor of ten.

That means Spain can just about cope, for now. But most of its water is in the north. In Spain's southern parts, which are separated by mountains from the wet north, reservoirs are running low. Those southern regions also produce much of the country's olive oil and a large share of Europe's vegetables, and will struggle to do so without water from the north.

Such transfers are often unpopular. Three Spanish regions are taking the central government to court over cuts to an existing water-transfer scheme, in part because it would lead to the loss of 12,000 hectares-worth of agricultural output, according to one government agency. But the inauguration in March of a new water transfer from the Tagus river to La Mancha, a white windmill-dotted region in southern Spain, showed that water-sharing for human consumption is less controversial than for agriculture.

Whether the next months will provide any relief for southern Europe is still unclear. "Seasonal climate predictions show a warmer than usual spring-early summer, but how wet it will be is still very uncertain," says Andrea Toreti of the Copernicus European Drought Observatory, an EU research body. A dry spring could hit agriculture hard, raising food prices again. Depleted waterways may have to be closed to big barges, increasing transport costs.

Low rainfall could also cause problems at Europe's hydroelectric plants, which produced a lot less in 2022 because of last year's drought. Their reservoirs are well filled in Spain, France and Switzerland, in part because governments intervened last year to keep levels up in case energy became scarce during the winter. The exception is Italy, where water for power generation is as low as it was in March last year, but with less snow in the Alps to refill the reservoirs as it melts. As droughts become more frequent, Europe has a long way to go before it is waterproof. ■



Combined drought indicator*
March 11th-20th 2023

🟨 Warning (drying soil)
🟥 Alert (vegetation growth affected)
🟩 Recovery (after drought)

*Monitoring areas at risk from or affected by agricultural drought
Source: European Drought Observatory

Charlemagne | The cough, cough continent

Europe is spluttering its way to better air quality

As autumn arrived last year, the residents of Nowy Targ, a market town in southern Poland, were given an unusual tip to keep their homes warm in the midst of soaring energy prices. "One needs to burn almost everything in the furnaces," said Jaroslaw Kaczynski, head of the ruling Law and Justice party, "aside from tyres and similarly harmful things, of course." On a recent visit on a crisp spring day, with snow lingering on the ground, the evidence of locals having taken up Mr Kaczynski's advice could be both seen and sniffed. Judging from the acrid smoke coming out of some chimneys, a few households may have even skipped the admonition about tyres. As the afternoon progressed and workers returned home to refill home furnaces ahead of chilly evenings, the mountains that skirt the town disappeared behind a dull haze. A bakery by the side of the road to the train station emitted a scent not so much of local delicacies as of combusted leather boots.

Europe prides itself as a green kind of place, the land of 15-minute cities where residents bike from work to yoga classes. But many bits of Europe still stink—literally. Those virtuous cyclists weave their way through streets thronged with diesel engines. Farmers spew ammonia, a pungent gas, into the air. What industry remains is the source of sulphur compounds that harm nature. Perhaps most worryingly, generating energy from fossil fuels to keep homes heated results in invisible clouds of particulate matter which clogs human lungs. Across the EU, over 300,000 people die prematurely from poor air quality every year, according to the EU's environmental arm. That is nearly half the number of excess deaths caused by covid-19 in its first 12 months.

True, Helsinki is not Beijing, and nor is Paris anything like as bad as Delhi. But 96% of all urban dwellers in the EU live in cities whose air quality is worse than levels recommended by the World Health Organisation (WHO). Of the 17 cities with more than 3m inhabitants located in the G7 club of rich countries, nine are in Europe—and they include the six most polluted ones. Thanks in large part to denser living, few towns in Europe can match the air quality of similarly-sized places in America.

Plans are afoot at European level to clear the air, one harmful gas at a time. This would build on steady improvements in recent decades: premature deaths are already down by nearly half since 2005, a quiet policymaking triumph. But even so, the EU admits there is little hope for most Europeans to breathe air within WHO guidelines for the foreseeable future.

In Europe as elsewhere, air quality is a result of geography and economics. The EU's most polluted big city is Milan, which sits in a river basin, hemmed in by the Alps and surrounded by lots of industry. The other pollution hotspot in the EU is around the border of Poland, the Czech Republic and Slovakia. For decades coal deposits in the region meant energy was cheap. Communist-era industrial complexes would guzzle the black stuff; enough coal by-product was left over to be fed into home furnaces. Known as smokers, and for good reason, these let locals heat their houses cheaply. Even as industry disappeared, the poorly insulated homes remained. Bits of Europe flipped to gas as an energy source, much of which was sourced from Russia. In Poland, coal was once a home-drilled marker of energetic virility—but then stocks dried up and came to be imported from Russia, too.

As countries get richer, voters demand better air, for example no longer tolerating belching factories on their doorstep. Central Europe is at the top end of a pollution-income trap: rich enough to buy lots of cars, say, but not rich enough to afford electric ones. Still, the region is on a clear trajectory to easier breathing. Take Krakow, a rich city a two-hour train ride away from Nowy Targ. It used to be known for its air "so thick you could taste it", says Andrzej Gula of Polish Smog Alert, which tracks air quality. A decade ago the group led a campaign to ban the use of wood and coal for home heating, which came into force in 2019. Subsidies were brought in for less polluting technologies, such as heat pumps. Now, says Mr Gula, the air is clean enough for you to smell the stink of diesel cars, once hidden by other foul scents. The new plan is to ban the most polluting vehicles from the city, too.

Other bits of Poland, with fewer tourists and less money, have followed the same path, thanks to a patchwork of local, national and EU-level edicts. Of late, the war in Ukraine has taken the wind out of the sails of better-air campaigners. Many measures to combat pollution have been suspended or postponed as energy prices soared, for example limits on the sales of the smokiest coal grades. Even as prices have come down, few think the measures will be reintroduced before elections in the autumn—just as the home smokers are rebooted.

Take a deep breath

Perhaps Europe's still-bad air is an opportunity for green-minded policymakers. For much of what is needed to de-smog the air is the same as what would bring down planet-boiling fumes, too. The EU speaks of cleaner air as a "co-benefit" of its flagship policy of cutting carbon emissions to "net zero" by 2050. Voters in central Europe generally see less urgency in combating climate change, which is viewed as a luxury concern imposed on them by nagging Scandinavian types. But a policy that can be shown to make local air cleaner is an easier sell.

Making the case for cleaner air has been hard recently. But even a cloud of throat-burning smog has a silver lining. The energy crisis will cause a bump in unhealthy air in the short term—but catalyse a faster fall thereafter, as cheaper renewables, heat pumps and the like are deployed faster than they would otherwise have been. The mayor of a town a little down the road from Nowy Targ complained about the dearth of rubbish being collected this winter, as waste gets diverted to home furnaces instead. Let's hope Europe's next energy crisis will be less pungent. ■

CHARLES III · D · G · REX · F · D
ONE POUND

Fixing the state

Tax brakes

Britain's tax take is getting bigger but not better

REFORMING THE BRITISH STATE

THE 2022-23 tax year ended on April 5th. The dates are the simplest aspect of the British tax system. People in England, Wales and Northern Ireland pay a basic rate of income tax of 20% on annual earnings over £12,570 ($15,612); Scotland has its own rates. Britons must also pay national-insurance contributions (NICs) of 12% of weekly earnings over £242, unless they are over the pension age or self-employed.

Recent university graduates with student debt must pay an additional 9% on anything they earn over £27,295. A 40% income-tax rate kicks in at slightly over £50,000, which is when parents also begin to be taxed on a welfare payment known as child benefit. The result can be a 60% marginal tax rate for those with two children and a 70% rate for those with three. For every £1 earned above £100,000, you lose 50p of the £12,570 tax-free allowance; the allowance falls to zero if your income is £125,140 or more. That means at least a 60% marginal tax rate for high-earning taxpayers—rising to over 100% for parents who start losing tax-free child-care benefits as well. And so it goes on—and on, and on.

No country has a perfect tax system. The deficiencies in Britain's, however, are becoming more obvious. Partly that is because the state is taking more out of citizens' pockets. The Office for Budget Responsibility (OBR), a fiscal watchdog, forecasts that from 2025 the government will rake in about 35% of GDP in tax, the second-highest level since the aftermath of the second world war.

But the principal problem is a profusion of exemptions that distort the economy, confuse taxpayers and deprive the exchequer of revenue. The goal of tax policy should be to raise funds efficiently and fairly. Tax should, as far as possible, encourage productive activities but discourage harmful ones, such as pollution. Fairness not only means ensuring the overall system is progressive, so that those with the greatest resources contribute more, but also that people in similar circumstances are treated equally.

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Britain's tax system is flawed on all these counts. Start with the three main taxes: income tax, NICs and value-added tax (VAT). Together these three levies account for about half a trillion pounds of government revenue per year, two-thirds of the total tax take (see chart 1 on next page). They are infested with complications. Income tax and NICs both apply to salaries, but a portion of NICs is also paid by employers. The self-employed pay NICs at different rates. Those over the state pension age do not pay NICs. Income tax is levied on investment income; NICs are not.

Such differences incentivise chicanery. The self-employed pay less in national insurance; so do those who set themselves up as a "company" and take their salary as a dividend, which counts as investment income. Businesses can collude with their staff to pretend they are not really staff at all, lowering the tax bill for both. That rewards those who tinker with employment structures instead of doing something more productive. The solution to such problems is simple: fold the two taxes together into one streamlined income tax. The

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benefits would be substantial. An analysis by the OBR found that a change in the rules in 2021, forcing firms to check whether their contractors were genuine businesses, had raised £1.5bn for the exchequer.

Value-added tax, which accounts for £140bn in revenue (around 5% of GDP), is similarly full of holes. The tax is levied at a 20% rate on most final purchases by consumers. But a range of goods, from food to domestic air travel, are zero-rated; others, such as domestic energy, attract a rate of only 5%. Companies with a turnover of less than £85,000 a year do not have to register for VAT at all. Such exemptions are forecast to cost the exchequer £67bn in the 2022-23 tax year, about half the total actually raised through VAT.

These exemptions reflect a variety of well-meaning motives. Excluding goods that are more likely to be bought by the poor is designed to ensure that VAT is progressive. The exemption for smaller companies, meanwhile, is meant to spare them from the administrative burden of registering for the tax.

Both rationales are misguided. Although the overall tax system should be progressive, not every individual tax needs to be. And the VAT exemptions for food and the like are poorly targeted. Exempting children's clothes from the tax, for instance, is more beneficial for the rich, who might be buying designer brands, than for those who rely on hand-me-downs. A more efficient way of redistributing funds would be to scrap the exemptions and use the extra funds to raise the level of benefits, which do target the poor.

In principle, the exemption for smaller firms makes sense; VAT returns are indeed burdensome. But the threshold incentivises companies to stay below a certain size. They are duly piling up at the £85,000 mark (see chart 2), which has been frozen in cash terms since 2018. By the time the freeze ends in the 2025-26 tax year the OBR expects the number of firms remaining just below the threshold to have nearly doubled, from 23,000 in 2018-19 to 44,000.

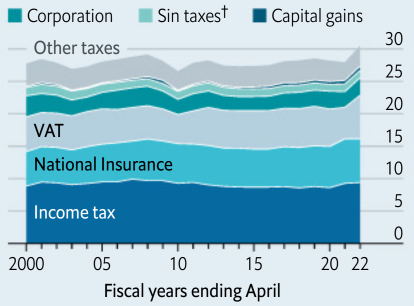
This is not only bad for the public purse, which misses out on VAT receipts payable by larger firms, but for the economy as a whole, since bigger businesses tend to be more productive. A lower threshold would make staying small a less viable option. It would also move Britain more into line with the European norm—German companies only need revenues of €22,000 ($24,050), for instance, to start paying VAT.

The same sorts of problems stalk other taxes. Britain has some of the highest taxes on property of any country in the OECD, a club of rich economies: it raises 3.8% of national income in this way. That sounds sensible on the face of it: property cannot be shifted offshore and owners often gain a windfall through no effort, just by being located in rich areas. Taxing such gains would be justified on grounds of both efficiency and fairness.

Tax stacks

1

Britain, taxes* as % of GDP



*Excludes council tax
†Alcohol, tobacco and gambling

Source: HMRC

Unfortunately, Britain's property taxes are poorly designed. They include stamp duty, a tax on the sale value of a property that is payable by the buyer, and council tax, which is levied on the resident but is based on the valuation of the property in 1991 (when it hastily replaced the poll tax).

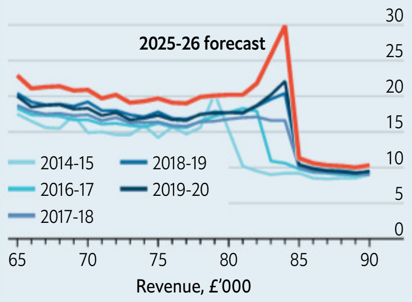
Stamp duty distorts the housing market. As it is only levied when a property is sold, the tax discourages moving house, and therefore a sorting of people into places where they can be more productive. Council tax, meanwhile, is regressive and arbitrary: present-day valuations have only a loose connection to those of over 30 years ago. That favours owners of property in London, where prices have risen faster, at the expense of the rest of the country. A land-value tax, based on up-to-date valuations, would be fairer and more efficient, encouraging landowners to put the space to its best use.

The Treasury deserves a lot of the blame for this situation. Britain's finance ministry is extremely powerful, combining as it does the functions of economic planning, tax collection and budgetary management. Its control over the purse strings gives it a veto, in effect, over how other departments spend their money. But the Treasury itself sits outside the normal policymaking process. Annual set-piece budgets, highly theatrical affairs in which the chancellor of the exchequer announces all changes to fiscal policy, are prepared in secret and without consultation. Many newspapers judge the budget by whether the chancellor manages to pull a "rabbit out of a hat" and deliver a popular surprise.

The power of incentives

2

Britain, number of companies by revenue, '000
Fiscal years ending April



Source: OBR

This arrangement encourages year-to-year tweaking and gimmicks rather than coherent strategy. It has led to a proliferation of tax reliefs over time, since cutting the tax on some categories of spending allows the chancellor to announce something popular at the budget. Any transport minister proposing subsidising domestic passenger flights, say, would get short shrift from the Treasury; an equivalent VAT exemption gets no such scrutiny.

Shoot the rabbit

One solution is to get rid of the theatrics. If taxes need to be changed, there is no reason to wait for a piece of parliamentary drama. And if they do not need tweaking, then no budget speech means one less opportunity to fiddle. Taxes should also be indexed to inflation, so chancellors would not need to get MPS' backing to keep fuel taxes, say, the same in real terms. A failure to uprate petrol duty for over a decade has cost the Treasury a cumulative £80bn.

Other countries involve relevant departments as well as the finance ministry when making fiscal plans. In Britain collective cabinet agreement with the budget package is assumed rather than earned through negotiation. One adviser says that Tony Blair, a former prime minister, begged Gordon Brown, his chancellor, for a "hint" of what was in the 1998 budget.

Making tax policy in the open would mean lots of lobbying, but getting people on board before announcements are made is better than U-turning under pressure. An attempt by George Osborne, a former chancellor, to get rid of a VAT exemption for hot takeaway food in the budget of 2012, raising the paltry sum of £110m, was immediately dubbed the "pasty tax" by the press and quickly rescinded. Kwasi Kwarteng's mini-budget in September was a far more dramatic illustration of how budget surprises can lead to disastrous outcomes.

Making changes to the tax system can be politically difficult. The losses from eliminating exemptions would be concentrated on just a handful of groups; the benefits of simplification and efficiency would be diffuse. But as the tax take gets ever bigger and more confusing, and Britain's productivity problems show no sign of easing, these benefits matter more. Any serious effort to reform the state would change both the way Britons are taxed and the process by which those taxes are set. ■

Bagehot | Rishi Sunak, Tory technocrat

The prime minister's problem-solving expertise is in service of political ends

THINK OF IT as the political equivalent of a flight to safety. Just as investors trade equities for government bonds when markets tank, so British voters have developed an appetite for technocracy after years of chaos. Bobby Duffy of King's College London runs the British leg of the World Values Study, a global survey of public opinion. In the 2022 version some 61% of Britons said that "having experts, not government, make decisions" would be a good system, up by 20 points from 1999. A similar trajectory can be seen across the rich world but Britons' liking for technocracy is the highest in the G7, and just below that of Moroccans and Nigerians.

Hence the appeal of Rishi Sunak, Britain's prime minister, whose personal polling is much better than that of the Conservative Party (and comparable to that of Sir Keir Starmer, the Labour leader). Asked to sum Mr Sunak up, officials cite a photograph of him buried in a folder of notes which was taken on the deck of a retired aircraft-carrier during a recent visit to San Diego. The message is clear: Mr Sunak is a workaholic and a problem-solver, undistracted from his homework even by the toys of the Pacific Fleet. Yet his is a strange form of wonkery. Mr Sunak offers technocracy but with Tory characteristics.

His elevation to Downing Street was technocratic. After losing to Liz Truss in the Tory leadership election last summer, he was hurriedly drafted into the top job six weeks later after she had blown up the gilt market. Think of him as Mario Monti to her Silvio Berlusconi. "Mistakes were made," he said of her time in office; his job was "to fix them". His approach to government since then has resembled a turnaround programme for a failing enterprise. He has laid out specific targets and timetables—reducing inflation, bringing down health-service waiting lists and curbing small-boat migration. He has been quick to patch up international ties strained by Brexit.

He brings a technocrat's discipline to Downing Street. Officials cite a remarkable work rate; his mantra is "to run as fast and as hard as we can". Whereas Boris Johnson's red box of papers was said often to sit outside his flat unread, Mr Sunak calls up reams of data and analysis from the civil service and interrogates the footnotes. "He's much more into the cooking," says one official of the policy process. His speeches are short on memorable lines; anthologies of political quotations will contain few Sunakisms.

Such traits would appear unremarkable to any mid-level executive in a large firm; in the Conservative Party they mark him out as a marvel. David Edgerton, a historian, wrote that Brexit was one symptom of the Tories' estrangement from modern British capitalism. Another is that the practices of high-performing businesses can seem so exotic. Mr Sunak, a graduate of Stanford University's business school, is the first prime minister to attend university abroad since Lord North in the 18th century, and the first to hold an MBA. That he is regarded as a curiosity by his colleagues for using terms such as "Q1" and knowing how to operate a Bloomberg terminal says less about him and more about Westminster, a sleepy place of threadbare carpets and jam roly-poly with custard.

But even if Mr Sunak stands out from the average politician, he is also not your typical technocrat. He made his political career by dissenting from the weight of expert opinion. As a young backbencher he backed Brexit not out of romance but as if it were an investment. "I wasn't ideological about it…somewhat analytically I sat down and looked through the numbers," he has said. As chancellor of the exchequer, he opposed a further covid-19 lockdown that was favoured by government scientists after reading a rival analysis on infection data prepared by J.P. Morgan, a bank. His methods may be wonkish but his conclusions have mirrored the instincts of less bookish Tory colleagues.

Although Mr Sunak is styled as a "fixer", his government shows an appetite for gimmicks. If Mr Sunak succeeds in curbing cross-channel migration, it will not be because of eye-catching plans to deport migrants to Rwanda or to house them on a barge. Neither will make a dent in the number of crossings this summer. His offensive against anti-social behaviour—higher fines for fly-tippers, making thugs pick litter in jumpsuits, banning laughing gas—is the political equivalent of the jazz standard. Just as there is a point in the evening when every bar pianist plays "Round Midnight", so every British prime minister announces a crackdown on yobs.

Worst of all, in many areas Mr Sunak offers no fixes at all on the ground that they are politically off-limits. Relations between the prime minister and his regicidally inclined parliamentary party are unusually smooth. That is partly because Tory MPs have come to appreciate competence, but also because he has let them have their way on house building, online regulation and migration as the price of stability. It matters little how much data Mr Sunak orders up from the civil service if a dozen backbenchers end up being able to provide their own answers.

Political fixer

Michael Gove, a long-serving cabinet minister, is remembered for claiming before the Brexit referendum in 2016 that Britons had "had enough of experts". His supporters say their man was misquoted; Mr Gove had objected to "experts from organisations with acronyms saying that they know what is best and getting it consistently wrong". This was not a denunciation of expertise per se, but a call to harness it and subordinate it to political control.

This is the best way to understand Mr Sunak's premiership. He is a man of technocratic habits, but those habits serve the political ends of holding power and taming a ruthless party. Tim Bale, the author of a new history of the contemporary Tory party, warns against seeing Mr Sunak as a centrist passenger in Mr Johnson's wayward government. He was, Mr Bale notes, an active participant in that regime. Mr Sunak has many talents. His greatest may be how well he hides his ambition beneath a technocrat's exterior. ■

The new non-aligned

How to survive a superpower split

BEIJING AND JOHANNESBURG

Crafty countries are dealmaking across geopolitical divides

CAUGHT BETWEEN America, China and Russia, many countries are determined not to pick sides. As the American-led order in place since 1945 fragments and economic decoupling accelerates, they seek deals across divides. This transactional approach is reshaping geopolitics.

One way of capturing the sheer scale and heft of these non-aligned powers is through a Russian lens. Our sister organisation, EIU, has analysed countries based on their economic and military ties to Moscow, their diplomatic stances including votes at the UN and whether they support and implement sanctions. Although 52 countries comprising 15% of the global population—the West and its friends—lambast and punish Russia's actions, and just 12 countries laud Russia, some 127 states are categorised as not being clearly in either camp (see map).

To get a handle on what non-alignment really means *The Economist* has also looked at a narrower panel of the 25 biggest economies that have sat on the fence on the Ukraine war, or wish to remain non-aligned in the Sino-American confrontation, or both. The members of this group—call them the transactional 25 (T25)—are hugely varied in terms of wealth and political systems, and include giant India and tiny Qatar. Yet they have some common ground. They are brutally pragmatic and have collectively become more powerful. Today they represent 45% of the world's population and their share of global GDP has risen from 11% in 1992 to 18% in 2023, more than the EU's. Their strategy of neutrality involves big risks and opportunities. Whether they succeed will influence the world order for decades. And needless to say, both America and China will work to win them over.

In the 20th century non-alignment meant different things to different countries at different times. At conferences in Bandung, Indonesia in 1955 and Belgrade, Yugoslavia in 1961, leaders presented a "third world" apart from the West and the Soviet bloc. From the late 1960s these countries increasingly focused on economic inequality between the "global south" (a less loaded term for the third world) and the industrial north. A formal institution, the Non-Aligned Movement, was joined by nearly every African, Asian and Latin American state. With the end of the cold war it became, in the words of an Indian academic, "a moribund organisation in need of a decent burial".

Today, non-aligned countries are not defined by their membership of an institution, but rather by their characteristics and behaviour. These middle powers are pragmatic and opportunistic. In a recent book Jorge Heine, a former Chilean diplomat, contends that in the 20th century countries often passively drifted into one or other of the superpowers' orbits. Today there is more "active" evaluation of the best means to achieve particular ends, he says. Some call it "minilateralism" (as opposed to multilateralism)—the targeted use of discrete alliances or groupings, rather than lumping your lot in with one bloc.

Non-aligned countries also usually think Western leaders are hypocrites. Some $170bn in aid was pledged to Ukraine in the first year of the war—equivalent to about 90% of spending on all global aid in 2021 by the OECD's Development Assistance Committee, a group of 31 Western donors. To the West, such generosity shows solidarity with a fellow democracy; to others it shows that rich countries cough up if it serves their interests. "Europe has to grow out of the mindset that Europe's problems are the world's problems, but the world's problems are not Europe's problems," declared Subrahmanyam Jaishankar, India's foreign minister, last year.

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Such stances are broadly in line with public opinion. A report by Cambridge University last year found that in liberal democracies 75% hold a negative view of China, and 87% do of Russia. But the picture is almost the reverse among the 6bn people who live elsewhere. A gap is opening up between how the West sees the world and how the rest sees it. In a poll published earlier this year by the European Council on Foreign Relations, a think-tank, a plurality of Indians (48%) and most Turks (51%) said the future world order will be defined by multipolarity or non-Western dominance. Just 37% of Americans, 31% of people in EU states and 29% of Britons agreed. The West thinks it is watching a sequel of the cold war; the rest of the world sees an entirely new film.

Wheeling and dealing

So who makes up the T25? The diverse group encompasses some of the world's most populous countries and two of its largest democracies, India and Indonesia, alongside Vietnam, Saudi Arabia and Egypt, which are all run by autocrats of various flavours. Large wealth disparities exist, too. In Saudi Arabia GDP per person is more than $27,000, on a par with some European countries, while in Pakistan it still lingers around just $1,600.

As globalisation has spread, the trade pattern of the T25 has become multipolar. Some 43% of merchandise trade is with the Western bloc, 19% with the China-Russia bloc and 30% with countries in neither of those camps (see chart on the next page). Perhaps unsurprisingly given its location, 77% of Mexico's total trade occurs with the West; over 60% of Israel's and Algeria's trade also does. More than a third of Chile's is with China, a higher share than any other T25 country (but 40% of its trade involves the West). More than half of Argentina's trade, and almost half of India's, is with other non-aligned countries.

Arms imports also show a complex mesh of loyalties. India hedges its bets. Between 2018 and 2022 its main supplier was Russia, which provided 45% of its arms, but it got another 29% from Europe and is likely to seek more self-reliance, with help from America. India's rival China, which supplies its arch-enemy, Pakistan, is out of the question. Israel, Morocco, Saudi Arabia and South Africa look instead to America for the vast majority of their arms imports.

There is no coherent governing body that represents non-aligned countries and their interests. None is expected to emerge. Instead a variety of disparate organisations, such as the G20, provide platforms of varying effectiveness for the major non-aligned countries. The BRICS group of countries—Brazil, Russia, India, China and South Africa—is a forum for middle powers that wants to expand: it is discussing whether to let Iran and Saudi Arabia join. At UN climate talks a broader group of more than 130 countries, including China, has negotiated together.

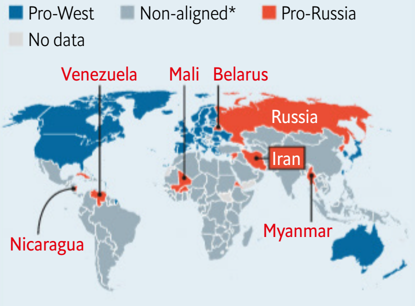
Despite their differences, the non-aligned countries share a common aim: to make expedient deals in a fluid environment. For two decades many were able to simultaneously build relations with the West, China and Russia. No longer. The West is imposing sanctions on Russia and restricting Chinese access to technology.

For many this is a grave threat. Sanctions on Russia saw energy and food prices soar globally, prompting a backlash across the non-Western world. More recently Janet Yellen, America's treasury secretary, has encouraged American companies to move their supply chains into friendly states. Beijing and Moscow, meanwhile, are drawing closer together. New research by the IMF notes that since 2018 geopolitical alignment, measured by similarity in UN voting patterns, has become ever more important in determining the location of foreign direct investment. Under the IMF's scenarios for fractured trade, the impact in emerging markets could be more than twice as bad as in advanced ones.

But many in the non-aligned world bet that they can win from economic decoupling and political fragmentation, by hedging their relations between the big powers and by influencing other countries themselves. To understand this transactional strategy, look at the approach of some of the big countries caught in the middle. Brazil is a good case study. It opposes what Mauro Vieira, foreign minister, calls "automatic alignments". Luiz Inácio Lula da Silva, who began his second stint as Brazil's president in January, sees President Joe Biden as an ally on climate change; at their meeting in Washington, DC, in February they re-established joint environmental institutions abandoned under Jair Bolsonaro, Lula's predecessor. America classes Brazil as a "major non-NATO ally", a legal status that entitles enhanced co-operation with America's armed forces.

Middle Earth

Country support, February 2023



Source: EIU

*Countries that have neither supported Russia and criticised NATO, nor imposed sanctions on Russia

Yet Brazil is also hedging between the superpowers. Like others in its region, it has declined Western proposals to give old Russian-made equipment to Ukraine in exchange for new arms. Lula's arrival in Beijing on April 14th will underscore China's economic importance (see Americas section). Trade between Brazil and China was nearly $153bn in 2022, a 37-fold increase in two decades. Partly this reflects how Brazil took advantage of tit-for-tat US-China tariffs to increase agricultural exports to China at America's expense.

Brazil is also making forays of its own. Lula will soon visit Africa to revive Brazil's influence there. During his first stint in office, trade with Africa rose from $6bn in 2003 to $25.6bn in 2012, and South Africa was welcomed into the BRICS bloc. Then Lula's predecessor made no visits to Africa. Lula evidently thinks it worthwhile to renew the effort.

India's fear of China has pushed it closer to the West in some respects. In March the prime minister of Japan, which like India, America and Australia, belongs to the "Quad", an Indo-Pacific security forum, visited Delhi in a landmark visit. In the 2021-22 financial year India's trade with America overtook that with China. Yet India still purchases weapons and cheap oil from Russia and is unlikely to break its longstanding ties unless Vladimir Putin's regime were to use nuclear weapons.

Practical, not partisan

Like Brazil, India is asserting itself more abroad: only China imports and exports more with sub-Saharan Africa. The average annual stock of FDI from India was $0.8bn in 2004 to 2008 (less than half of Sweden's) but $31bn a decade later (more than Germany's and Japan's combined). Last month India hosted representatives from 31 African countries for war games. India promises to use its chair of the G20 this year to be the "voice of the global south".

Turkey also wants more clout across the global south. It has security agreements with 30 African states and its defence exports to Africa rose more than five-fold from 2020 to 2021. Advisers to Turkey's president say the "New Turkey" can select its partners. That may explain its ostensible neutrality over the war in Ukraine, which Turkey has used to leverage its ties to Russia. Turkish exports to Russia reached $7.6bn in 2022, a 45% increase on the previous year.

Saudi Arabia is reducing its reliance on its historical ally, America, by tilting towards China, which is now the kingdom's largest trading partner. Consider decisions this month and in October by the Organisation of the Petroleum Exporting Countries, which Saudi Arabia dominates, to slash oil production. Last month Saudi Arabia signed a Chinese-brokered deal with Iran ▸▸

and joined the Shanghai Co-operation Organisation, a Eurasian talking shop. China says it wants to establish a free-trade deal with the Gulf "as soon as possible".

Gulf countries' relations with Africa were once confined to energy, agriculture and the politics of the Horn of Africa. Today Saudi Arabia and the United Arab Emirates hunt for minerals deals; DP World, a Dubai-based ports operator, is emerging as a critical logistics firm on the continent; and Qatar is playing novel diplomatic roles. Last month it was involved in brokering the release of Paul Rusesabagina, a jailed Rwandan dissident (and the inspiration for the film "Hotel Rwanda").

African countries have long looked to both superpowers. The West has generally been their preferred source of "software": support for schooling, health and, should a government want it, human rights. China offers "hardware": bridges, roads, ports—and the loans to build them. Between 2007 and 2020 America's main development agency lent less than a tenth of the total of China's two major development banks ($1.9bn v $23bn) for sub-Saharan African infrastructure projects.

In some parts of Africa the West's promises to ensure security have rarely seemed as hollow. "Americans need somewhere for their troops and agents to sleep. But the security relationship does nothing for development," explains a former adviser to an African president. "That's why we need China." In August the last French troops left Mali after a nine-year deployment; the Wagner Group, comprising Russian mercenaries, now helps prop up the ruling junta.

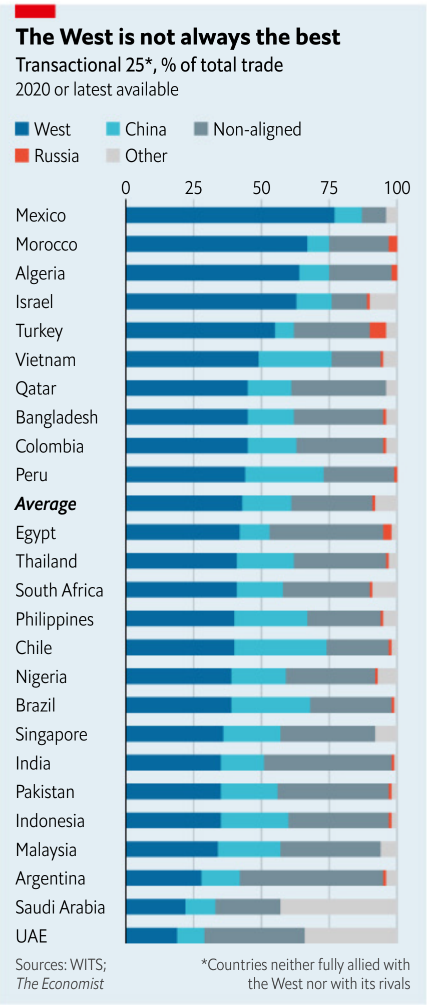
The non-aligned countries want to avoid taking sides. But the big powers, America and China, are keen to draw them into their orbit. Beijing sees asserting leadership of the global south as a way of bolstering its resistance to American pressure. It positions itself as a model for others within a broad family of developing countries. It draws a contrast with the West, which it says prefers smaller clubs (like the G7). "China shows up where and when the West will not," says Yemi Osinbajo, Nigeria's outgoing vice-president.

Eastern friends, western pals

China is the main trading partner of around 120 countries and the lender of first and last resort for many. Between 2007 and 2020 it provided more infrastructure financing in sub-Saharan Africa than the next eight lenders combined. It will be pivotal to resolving sovereign-debt crises. Analysis of 73 developing countries by the IMF notes that in 2006 China held just 2% of this group's external debts, with the mostly Western "Paris club" group of creditors accounting for 28%. By 2020 the respective shares were 18% and 10%.

Those in the West have reason to roll their eyes. China's "win-win" rhetoric masks its ruthlessness. "Banking on Beijing" (2022), by Bradley Parks of AidData, a research outfit, and co-authors, shows how China uses its economic tools for political ends. It often skews its funding towards incumbent leaders' home districts—and is more likely than the West to lend to corrupt and autocratic countries. AidData also finds that a 10% increase in voting similarity with Beijing at the UN is associated with an increase in Chinese projects in that country. Chinese loans come with unusually strict clauses on confidentiality and collateral. But Chinese development projects are associated with boosts to GDP per person, notes Mr Parks.

In the face of China's efforts, America and its allies are trying to recalibrate their message to the non-aligned world. America understands that other countries' consent bestows legitimacy on the international order it leads. "Countries don't want to choose, and we don't want them to," Jake Sullivan, Mr Biden's national security adviser, told the *Washington Post* earlier this year. America is pursuing diplomacy in places it has neglected. Kamala Harris, America's vice-president, Ms Yellen and Antony Blinken, its secretary of state, have all visited Africa in 2023. Mr Biden will soon follow.


The West is not always the best

Transactional 25*, % of total trade

2020 or latest available

Sources: WITS; *The Economist*

*Countries neither fully allied with the West nor with its rivals

America has also bolstered security partnerships with influential non-aligned countries. In November Lloyd Austin, its defence secretary, met his Indonesian counterpart for the fourth time; in January American and Indian officials agreed to deepen co-operation on cutting-edge defence technologies. In total America maintains 88 defence "partnerships" (excluding formal alliances such as its one with NATO), though some are limited in scope.

Though America and the EU have in recent years launched rival schemes to the BRI, the perception remains that, if you want infrastructure that can help transform your economy, your first call is to Beijing. After Ms Harris released a soundtrack featuring African artists to accompany her recent visit to the continent, one senior African official noted, dryly, that Chinese visitors bring loans and engineers while Americans bring playlists.

A political paradox

The Biden administration is widely seen as embracing a two-tier foreign policy: first come relations with its core democratic allies in Europe and Asia (which it hopes might one day include India)—and then those with creaking global institutions. These mediate meet the needs of a broader group of countries, including most non-aligned ones, whether on development, debt relief, security or finance.

That presents three challenges. First, Western unity must hold. Yet that is not a given. During his recent visit to China Emmanuel Macron, France's president, said that Europe's states should not become "followers" of American policy on Taiwan, nor "adapt to the American rhythm".

The second is that China can undermine global institutions by, for instance, opting for bilateral debt relief rather than fully participating in co-ordinated efforts. Chinese creditors' obstinacy at the IMF is hampering what flexibility it can offer to countries struggling with debt.

The final challenge concerns the mistrust of the West that is fed by its broken promises. Take climate finance, for example. In 2009 rich countries said they would channel $100bn to poorer ones per year by 2020; the annual total has never been higher than $85bn.

By drawing on their liberal values and shared history, America and its allies were able to rally behind Ukraine after Russia's invasion. They have shown newfound resolve against authoritarian China, too. The risk is that this coming together deepens the estrangement of the global south from the international order. It would be a tragic result if, in uniting the West, America alienates the rest. ■

Lobbying in America

Welcome to the green swamp

WASHINGTON, DC

Some $800bn of taxpayer dollars could go to climate-friendly investments. A new breed of adviser will help you get your share

DAVID, WHO runs a well-trafficked shoeshine stand at a huge convention centre just outside Washington, was in a good mood as he surveyed the delegates at a recent event there. They were attending the ARPA-E summit, an annual pow-wow put on by the Department of Energy (DOE), and were tipping well. A few weeks earlier, when Donald Trump spoke at that same venue at a gathering of conservative Republicans, David was forced to shut down his stand and lost business. It is not his only grumble about Mr Trump: "When he ran for office he promised to drain the swamp, but he turned out to be the biggest crocodile of them all."

David is right. During Mr Trump's presidency, lobbyists for every corporate interest went into high gear to try to influence the unorthodox administration of Beltway outsiders. Lots of unfamiliar swamp creatures turned up, too, when they realised that having the ear of the last person to speak to Mr Trump before he made a big decision was lobbying gold. They have since slithered away. But, with up to $800bn in clean-energy handouts now up for grabs over the coming decade, another invasive species is taking their place.

The energy industry as a whole spent nearly $300m last year on lobbying, the most since 2013 (see chart 1 on next page). Big oil and electric utilities, which had been reducing their spending on influence-seeking before 2020, have ramped it up again; spending is growing in line with that of the biggest lobbyists, big pharma. Renewables firms went from spending an annual average of around $24m between 2013 and 2020, to $38m in 2021 and $47m in 2022. "We've now got an interesting new ecosystem of swamp creatures here," says the government-relations man at a giant renewable-energy company.

The reason is the passage last year of the Inflation Reduction Act (IRA). The law funnels at least $369bn in direct subsidies and tax credits to decarbonisation-related sectors (see chart 2). It came on the heels of the Bipartisan Infrastructure Law, which also shovels billions in subsidies towards clean infrastructure. Some of the provisions offer generous tax credits, with no caps on the amount of spending eligible for the incentives. A mad investment rush, should it materialise, could lead to public expenditure of $800bn over the next decade. An official at a big utility says her firm has projects in the works across America that, if successful, will secure a staggering $2bn in funding from the two laws. "We stopped counting…we just have a big smile on our faces all the time these days," confesses the renewables firm's government-relations man. "There is a lot there for a lot of people," sums up a business-chamber grandee. And, he adds, "A lot of lobbyists are interested in the spending."

The green influence brokers can be spotted in all the usual places, starting with Capitol Hill. A long-time lobbyist-watcher reckons that the IRA "is the most targeted bill of the last 20 years". More than 2,000 groups had officially declared their interest in the congressional sausage-making that produced the gargantuan law last year. The IRA and the infrastructure law are now on the statute books, of course. But buttering up congressmen and

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senators may still be worth the effort. "The administration still has to present budgets and members of Congress still have their say," explains one senior DOE official turned adviser. And, adds a lobbyist for a rising climate-tech investment firm, "A member of Congress can always ask a question in a hearing or send a letter of complaint to the White House."

The White House itself is another target. A partner at a top lobbying firm explains that for potentially lucrative but politically explosive issues, "people in the White House want to be looped in." These include local-content requirements for electric-vehicle manufacturing and the maximum carbon intensity for hydrogen to be considered "clean". On such matters, the partner says, John Podesta, President Joe Biden's wrangler for all things climate and energy, "makes the final call". Love Mr Podesta or hate him, says one energy operative not in the loving camp, "he has a reputation for being practical, and focused on getting things done."

Two executive-branch agencies rank high on the green lobbyists' hit list. The DOE's experts will decide which sectors and technologies to prioritise; just its Loan Programmes Office, which aims to provide "debt financing for commercial deployment of large-scale energy projects", now has $400bn to lend out, for example. Another target is the Treasury Department, and in particular the Internal Revenue Service (IRS), whose tax experts are fleshing out the rules for green tax credits.

The DOE is the more welcoming of the two. "Of course you can lobby the DOE," says Brian McCormack, a former DOE chief of staff. "Companies go there all the time to talk about what they're doing." One challenge now, Mr McCormack says, is that many government employees are still not going into the office regularly. It is harder to make your case on the phone or via video conference, he reckons.

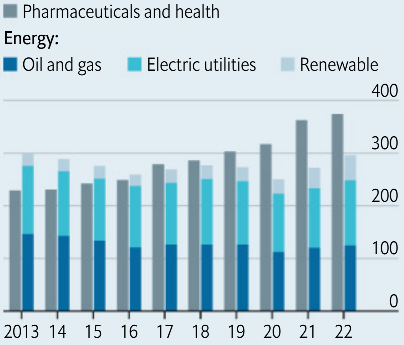
It is harder still at the IRS, which, the clean-tech-investment lobbyist says, "is immune to direct lobbying". Getting through to the taxmen is possible but requires a more subtle approach. A law firm renowned for its tax expertise has secured a coveted meeting with officials on behalf of a client in part, says one of its partners, by submitting "really good comments" and clever technical papers on the relevant subject. Many IRS officials know their tax law inside and out but have little understanding of energy. "You have to have credibility for them to see you and you have to bring them solutions," she explains.

1

Foyer flies

United States, spending on lobbying

Selected industries, $m



Source: OpenSecrets

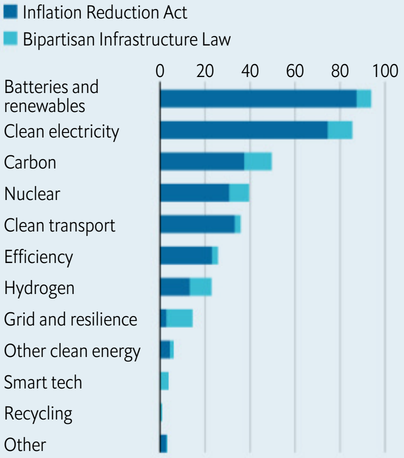
For the lobbyists' corporate clients, such considerations put a premium on certain sets of skills. One group in high demand is experts in finance and accounting, especially in niche areas such as tax-equity transactions (in which investors agree to fund a project in return for the right to claim a tax benefit) or the ins and outs of whether tax credits can be transferred or stacked on top of each other. One clean-energy lobbyist observes that the new climate-related laws are more complicated than anything in the past, yet the number of people working on them in industry and in government has not changed. "With so much more complexity," he says, "it is worth paying for your service if you can parse through something in half an hour that takes someone else eight hours."

Another sought-after group is energy nerds. A long-time advocate of upgrading the power grid gleefully reports his sudden popularity, as electrifying industries struggle to work out how to get transmission lines and other power infrastructure built. Specialists in nascent technologies on which the new laws shower subsidies, such as carbon removal, which prevents emitted CO_2 from entering the atmosphere or sucks it back once it is out, are also in demand. "We are Treasury whisperers," boasts the top government-relations expert at a climate-tech fund. The fund's bets on things like carbon capture and hydrogen electrolysis have given it deep expertise in these areas, which it is sharing with the tax bureaucrats. It is also sweet-talking environmentalists, whose "ignorant and aggressive positions early on" were often caused by unfamiliarity with either the new technologies or the tax code.

2

Fishing with IRA and BIL

United States, federal energy funding over next 5-10 years*, $bn



Source: "The Inflation Reduction Act: Here's what's in it", McKinsey & Company

*At October 2022

The billions of dollars going out through grants, meanwhile, has raised the stature of advisers with experience in writing grant applications. Many firms are baffled by having to pen 30-page proposals and working out things like who exactly counts as a "non-federal partner". Some of the grants now on offer "can make or break a business model", notes Mr McCormack. Take a company going after half a dozen DOE grants worth $10m apiece, he says. "Isn't it worth $100,000 to get a professional to help you put together a proposal, identify which offices on Capitol Hill you should visit and get a strategy together?"

Ecological niche

Specialised consultancies are stepping in to provide corporate IRA supplicants all these newly prized skills in one place. Boundary Stone Partners, a prominent example of the trend, employs many former DOE officials. Like Mr McCormack, Boundary Stone's co-founder, Brandon Hurlbut, served as DOE chief of staff. Jeff Navin, the other co-founder, says that the firm's aim is to act as a translator between clean-energy policymakers, technologists and investors: "The three groups did not talk the same language." Boundary Stone claims to have helped ease the passage of a demonstration programme for next-generation nuclear reactors (to the benefit of one of its clients, a nuclear-energy startup backed by Bill Gates called TerraPower) and to have assisted various solar-panel manufacturers in securing lucrative tax credits for domestic production.

How much influence the green lobbyists actually wield in Washington is open to debate. Their clients clearly think they are doing some good. More surprisingly, so do parts of officialdom. A lobbyist for an influential environmental group says that critical staff either fled government or were expelled during the Trump era, leaving agencies "struggling to get work done". Against this backdrop, many bureaucrats see thoughtful lobbyists as helping "get things right". Rich Powell, head of ClearPath, a climate-innovation advocacy group influential among Republicans, believes that they can help strike grand political bargains, of which the energy transition will need plenty. "Swamps may be the most vital ecosystem," he says. ■

Green supply chains

Nickel and dimes

SINGAPORE

Indonesia's nickel boom tests Western green sensibilities

The green gold rush

In a miserable year for initial public offerings, Indonesia's capital is turning heads. The Jakarta Stock Exchange enjoyed record IPO volumes in the first quarter. The $800m raised in these flotations outstripped the sums drummed up on Hong Kong's or New York's stock exchanges in the same period. The bulk of the money came from the listing of Pertamina Geothermal Energy, a green subsidiary of the state oil-and-gas giant. It may have been just the start of Indonesia's clean-energy IPO boom. On April 12th Harita Nickel, a firm that processes the battery metal, pulled off the country's biggest IPO in almost a year, raising nearly $700m at a valuation of around $5bn. Later this month Merdeka Battery Materials, another nickel firm, aims to raise more than $500m.

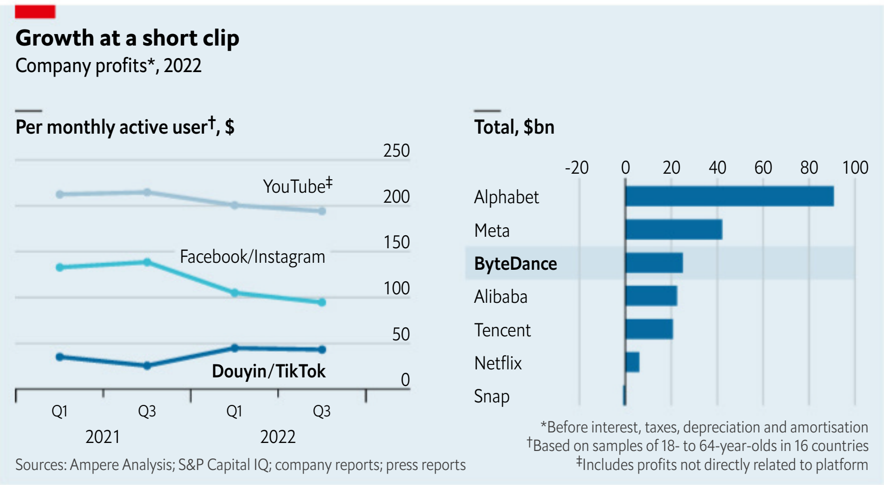
Nickel is at the centre of Indonesia's efforts to become a clean-energy superpower. The country has one of the world's two largest reserves of the stuff. In an attempt to capture more of the higher-margin markets for metal-processing and battery-making, a decade ago the government banned the export of raw nickel ore. Harita's and Merdeka's blockbuster IPOs show that the policy is having an effect. But the industry also highlights some of the uncomfortable trade-offs involved in the global battery business.

The first set of trade-offs is environmental. Digging up and smelting nickel is a grubby trade. JATAM, a network of NGOs, has accused Harita of making land grabs on Obi island, where it has a smelter, and of polluting the water around it. Harita denies the claims, and has the backing of the local and national governments. It touts a planned investment in a 300-megawatt solar-power plant for 2025 as evidence of its efforts to diversify away from the coal that currently fuels its operations on Obi.

Western investors and nickel-buyers, under pressure from environmental activists and virtue-signalling consumers back home, are still uneasy. This discomfort must be weighed against the desire of those same groups to accelerate the energy transition. A lot more electric cars must hit the road if the West's climate goals are to be met: just one in four sold last year in China and Europe, and one in 14 in America, were electric or hybrid. Without Indonesian nickel, getting to net zero emissions would be tougher than it already is.

The second set of trade-offs concerns geopolitics. America and Europe want to rely less on authoritarian China for all manner of technology, including in clean energy. Western governments may end up splurging on the order of $1trn to wrest green manufacturing from Chinese firms, which dominate sectors from critical-mineral refining to the making of batteries and solar panels (see previous article). Yet Chinese involvement in these industries will remain a fact of life for years to come. That is also true in Indonesia, where Western companies often find themselves working with Chinese ones. In March Ford teamed up with a local firm, PT Vale Indonesia, to erect a $4.5bn nickel processing plant on the island of Sulawesi. Their other partner is a Chinese firm, Zhejiang Huayou Cobalt.

Other Westerners may still shun Indonesian nickel. If so, less squeamish rivals will happily step in. Last year South Korea's LG Energy Solution and CATL, its bigger battery-making rival from China, each broke ground on new Indonesian smelters. In March POSCO, a South Korean industrial group, announced it would build a nickel-processing plant together with Ningbo Richin, another Chinese metals firm. ■



Growth at a short clip

Company profits*, 2022

Sources: Ampere Analysis; S&P Capital IQ; company reports; press reports

*Before interest, taxes, depreciation and amortisation
†Based on samples of 18- to 64-year-olds in 16 countries
‡Includes profits not directly related to platform

ByteDance the night away

TikTok is becoming the West's favourite time sink. Last month it said it had 150m users in America, putting it ahead of Instagram and within striking distance of Facebook, two social networks owned by Meta. For its Chinese parent company, ByteDance, it remains a money sink. ByteDance can afford to be patient with the lossmaking Western app thanks to its lucrative Chinese version, Douyin. Last year the tech group as a whole made a gross operating profit of $25bn or so, most of it at home. On that measure, it overtook China's reigning tech titans, Alibaba and Tencent. The gap between Meta's overall profits per user and those of ByteDance's apps is narrowing—and will shrink further once TikTok starts making money. Unless, that is, Western politicians act on their threats to ban TikTok on national-security grounds.

Food producers

Yes, they can (and box, and package)

NEW YORK

Fat times for America's big food

FOR YEARS nutritionists have advised Americans to steer clear of grocery shops' central aisles and instead fill their trolleys from the outlying shelves. Fresh meat, dairy products, fresh fruit and vegetables often line supermarket walls; cans, boxes and other packages of less salubrious processed food are stacked in the middle. Some shoppers have heeded that advice: sales of canned soup have been lacklustre in recent times, even as those of fresher refrigerated *potages* have grown. Now makers of the packaged stuff are staging a comeback. This says as much about shifting economic conditions as it does about products on shelves.

This month Conagra, which owns brands including Orville Redenbacher's popcorn, Bird's Eye frozen veg and Duncan Hines cake mixes, reported bumper results for its latest quarter. Sales and margins were all up year on year. The company expects higher earnings in the fiscal year to May than it had previously forecast. A few weeks earlier General Mills, which peddles canned soups, frozen vegetables and breakfast cereals, unveiled similarly juicy quarterly numbers. McCormick & Company, which sells spices and sauces, and the J.M. Smucker Company, best known for jams and peanut butter, are likewise having a sweet time of it. Investors are licking their lips: Conagra's share price has risen by 8% in the past 12 months, compared with a decline of 7% for the S&P 500 index of large American firms. General Mills' has shot up by 23%.

For America's packaged-food firms, the past decade was a cycle of famine and feast. Lean years before the pandemic ended when restaurants closed amid covid-19 and people stocked their pantries. Stimulus cheques from the government meant that shoppers were flush and the food companies were not being nagged by their retail partners to offer discounts. Then in 2022 people began dining out again, putting pressure on volumes even as commodity-price shocks caused by Russia's invasion of Ukraine pushed up costs.

As big food's results show, the industry is managing to ride out the latest tumult. For one thing, the pandemic may have altered consumer habits, leading to a lasting bump in the consumption of frozen and packaged meals. Americans are still eating more meals at home than they were before the first covid-19 lockdowns. According to EY, a consultancy, nearly three in four consumers anyway do not carefully distinguish frozen vegetables from the fresh sort, treating them as the same category. And though inflation is leading shoppers to trade down from branded products to retailers' cheaper private-label offerings when buying things like cosmetics or home goods, they are still happy to pay a bit extra for premium grub; 20- and 30-somethings in particular seem readier to spend larger shares of their income on food and are less likely to trade down than their elders.

Children can't get enough of frozen

The food giants also benefit from a diverse range of products and brands, which they are adapting to changing consumer tastes. Conagra has introduced (Italian readers avert your eyes) "crustless pizzas"—microwavable boxes of sauce, cheese and meat—to appeal to the carb-phobic. Its vegan Power Bowls seem tailor-made for the avocado-loving yoga crowd. General Mills is marketing cereal as an after-school snack and alternative to dessert in the evening, rather than just something to munch for breakfast. And although they managed to maintain or even expand their margins by raising prices in line with their costs or faster, they might be all too content to take advantage of cheaper inputs without concomitant price cuts.

Can the good times last? The biggest question-mark hangs over sales volumes, which could be crimped by those higher prices and a looming economic slowdown that may prompt shoppers to start pinching pennies. If wage growth slows or unemployment ticks up, at some point people will probably cut back even on smaller luxuries. Should one food firm decide to trim prices in an effort to boost volumes at its competitors' expense, an old-fashioned price war may erupt. For the time being, though, the foodmakers will keep reaping the peace dividend. ■

Mining

To build or to buy?

That is the question for miners in the 21st century

IN FEBRUARY TECK RESOURCES finally announced its slow move into the future. The Canadian miner plans to spin off its relatively dirty steelmaking-coal operations. Under the plan, Teck would focus on mining copper and zinc, while continuing to get the majority of the severed coal company's profits. Holders of Teck's super-voting "class A" shares would retain control over the rump firm's strategic moves for six years. After that its dual-shareholding structure would be scrapped.

Glencore, a much bigger commodity firm based in Switzerland, has something much more radical in mind. It proposes a merger between it and Teck that would then create two giant versions of Teck's proposed entities. The first would amalgamate Glencore's and Teck's metals and minerals businesses. It would be listed in London and have an enterprise value of perhaps $100bn. With copper mining expected to make up roughly half its profits, "GlenTeck" would be a red-metal giant poised to take advantage of a green commodities supercycle. The second company would combine the parent firms' coal businesses, to be listed in New York. This "CoalCo" would shovel all cash it generates to shareholders as the world weans itself off the black stuff.

Glencore publicly announced its unsolicited offer on April 3rd. Its boss, Gary Nagle, said that the deal, with an implied premium of 20% over Teck's share price, would cut costs and unlock shareholder value. After swiftly rejecting the offer, his opposite number at Teck, Jonathan Price, called the transaction a "non-starter", complaining that it would expose Teck's share-

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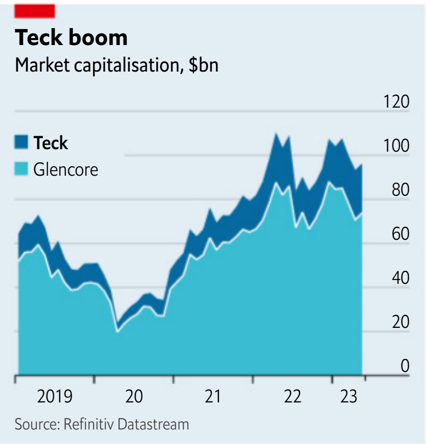


Teck boom

Market capitalisation, $bn

Source: Refinitiv Datastream

holders to Glencore's thermal-coal business, which may command less enthusiasm from investors than coking coal for steel mills. Mr Nagle fired back on April 11th, offering Teck's shareholders their quarter of CoalCo in cash rather than shares. If later this month shareholders scupper Teck's original restructuring plan, which requires approval from supermajorities of both share classes, the firm could be forced to the negotiating table.

Even then, securing a merger will be difficult. It would be the biggest acquisition of a Canadian miner since 2007. The Keevil family, which owns many of Teck's super-voting shares, is a hard sell. Norman Keevil, the patriarch and Teck's chairman emeritus, has made plain his desire to keep the firm in Canadian hands. Canada's government shares his wariness: it is tightening foreign-investment rules in its critical-minerals sectors.

To placate the Keevils and the Canadian authorities, Glencore promises to keep GlenTeck's industrial head office in Canada. In addition, it has pledged domestic employment guarantees and a secondary listing on Toronto's stock exchange.

If Glencore's overtures to Teck fail despite all these sweeteners, the Swiss company may still want to put its coal business up for sale. Other mining bosses may be ready to start shaking hands, too. On April 10th Newmont, an American mining giant, raised its takeover offer for Newcrest, an Australian gold miner, to almost $20bn. Years of dwindling capital expenditure and a commodities boom have left miners flush with cash. With their shares often trading close to the replacement value of their assets, buying looks more attractive than building. ■

Bartleby How to thrive in the video age

Screen presence is now a feature of the modern office

THE PANDEMIC embedded video into the workplace. Workers who had never previously been on camera suddenly spent every hour of the day getting used to the sight of themselves and their colleagues on screen. Executives realised that they could send video messages to their workforces rather than having to convene town halls.

There is no going back. Blogs have become vlogs. Meetings are now recorded as a matter of course, so that people can fail to watch them back later. Some firms routinely ask applicants to record answers to certain questions on video, so that people can see how well prospective recruits communicate.

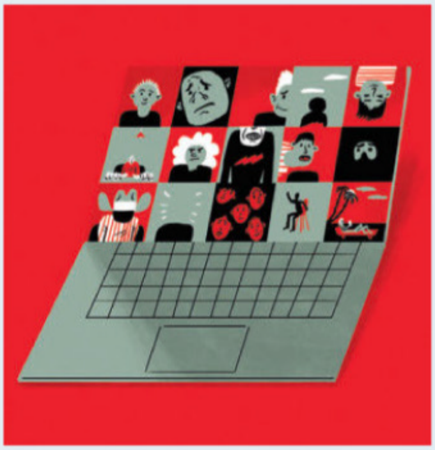
Since video has become more central to work, it pays to be good at it. Being a star in the video age means having the right set-up, speaking well and listening well. Workers can improve under their own steam, but companies can help, too.

To see what the right set-up looks like, just observe the range of images on your next video-conferencing call. It will probably be a complete mishmash. Some people will be bathed in the warm glow of a ring light; others will be emerging from the shadows like the Emperor Palpatine. Some will have high-definition cameras that show off every pore and follicle; others will be smeared across the screen. Some will be Hollywood types, observing the rule of thirds by positioning themselves slightly off-centre; others seem to have learned their craft from "The Blair Witch Project".

There is a limit to how level the playing-field between home offices can be, when living arrangements between employees differ so greatly. Not everyone needs to look like an A-lister: people who regularly make presentations or see clients have greater claim on fancier gear. Some people are photogenic, others less so. But this range in video quality can nonetheless be narrowed.

A study published last year by Katherine Karl of the University of Tennessee and her co-authors looked at workers' most common complaints about video-conferencing meetings: camera angles, proximity to the screen and bad lighting all feature in the list of frustrations. Whether providing decent home-working equipment or just giving feedback on how people appear on screen, employers can help everyone improve their video game.

Advice on how to present well on video is not that different to advice on presenting in general. But there are some specific pitfalls with video. One is where to look. Staring into the camera is unnatural; some advise pinning a photo of someone you respect right by the lens (whether you would really use the opportunity to talk to Volodymyr Zelensky to tell him about your product road map is another question). But looking at the camera is harder if you are referring to notes on the screen at the same time. The speaker whose eyes dart from one to the other is in fear of imminent attack; the speaker who gazes at a point somewhere just off to the left of the camera is appearing in "The Office". Teleprompter software may be the right answer.



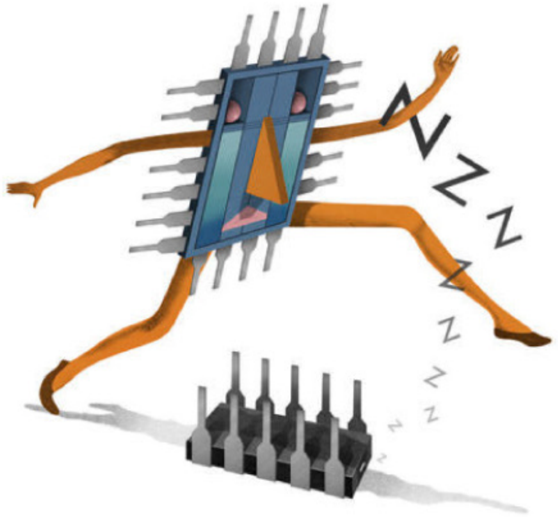
Another danger lies in the temptation to use technology just because it is there. The same rule of thumb that should stop you exploring the animations menu in PowerPoint also applies to pre-recorded video. Don't do jump cuts or special effects unless you really know what you are doing. This is not "Lock, Stock and Two Smoking Quarters".

Perhaps the least recognised skill in the video age is listening well. After all, one of the great boons of the virtual meeting is that you can get actual work done in it—being able to turn your camera off when your time is being royally wasted may be the pandemic's greatest gift to productivity. And at the other end of the scale, one of video's great downsides is how distracting it can be: as well as checking yourself out and following the online chat, you can critique someone's new wallpaper while watching their next-tile neighbour shovel noodles into their mouth. It takes real effort to stay focused in such circumstances.

The wrong way for firms to tackle the problem of inattentiveness is to insist that cameras stay on or use artificial intelligence to analyse the sentiment of meeting participants in real time. As if life were not intolerable enough, imagine having to nod and smile dementedly the whole time in case an algorithm decides you are insufficiently engaged. The right way for companies to respond is to make meetings shorter and more relevant. Whether you are on camera or in the room, it is always easier to listen when there is something worth hearing.

Schumpeter | Down memory lane

Samsung should be wary of Intel-like complacency



There is a good tale about Samsung's entry into the silicon-chip business, which at the time—1983—was dominated by Japanese and American manufacturers. Lee Byung-chul, the founder of the South Korean *chaebol*, announced the new strategy in what he grandiloquently called the Tokyo Declaration. He said that though his country lacked raw materials such as oil, it had an educated and diligent workforce that was well equipped to turn its hand to chipmaking. As Geoffrey Cain recounts in his book, "Samsung Rising", shortly afterwards some Samsung executives were sent on an overnight march across the mountains from Seoul to toughen them up for the challenge. They arrived at Samsung's first semiconductor factory, built in a record six months, and signed a pledge before breakfast to make the business a success. Then, without sleeping, they put in a 16-hour work day.

Call it true grit or call it Samsung's martial-style work ethic. One way or another the company force-marched its way past the competition to dominate the global market for memory chips. For more than 30 years, it has been the world leader in DRAM, used for memory storage in computers and servers, and for more than 20 in NAND flash memory, used in mobile phones. Yet since 2021, memory chips have been at the forefront of a boom-bust cycle in the semiconductor industry, which started with shortages, was followed by a surge in capital spending and has now become the worst slump at least since the global financial crisis of 2007-09. Samsung Electronics, which includes the conglomerate's semiconductor, display and consumer-device units, is feeling the pain. On April 7th, while projecting a meagre first-quarter profit, it said it would cut memory-chip production. This is an attempt to help reduce oversaturation in the market.

In the memory-chip business, Samsung's lead has long been unassailable. Through regular market downturns, it has always been "the last man standing", says Malcolm Penn of Future Horizons, an industry forecaster. Its size, with revenues last year of $240bn, gives it the economies of scale to ride out price declines for longer than its competitors. Its smartphone business, though not growing as fast as it once did, produces reliable cashflows to help it invest through the troughs of the chip cycle. When others struggled, it gobbled up their market share. That helped whittle down its large competitors from almost a dozen in the 2000s to only two today—SK Hynix of South Korea and Micron of America. Samsung has a cosy lead, with over 40% of global sales.

In the latest cycle, it had long held out against production cuts. Its capitulation came months after beleaguered SK Hynix and Micron said they would curb output. What was curious, however, was the impact. Samsung's share price, as well as those of the two rivals, surged. The simple explanation for the rally is that whenever the market leader throws in the towel, it is a sign that the bottom of the slump is nigh. Yet there is a subtler one, too. Samsung's position at the top of the memory triumvirate may be so cushy that it has no desire to grab more business from its rivals. That might bring stability to the market. It would also signal a sense of complacency that would make Lee blanch.

There was a hint of that complacency in a presentation to investors last November. Han Jin-man, head of memory sales, acknowledged that memory chips are sometimes seen as commodities, their price swinging in response to volatile capital spending. But he insisted that capital expenditure had stabilised over the past decade, the DRAM trio were investing rationally and the market was now better-balanced. In other words, Samsung seemed content to ride the growth in the overall DRAM market, which it expects to triple to almost $300bn by 2035, rather than go after its competitors' market share.

Un-Lee-like self-satisfaction is on display in other areas, too. Samsung has lost some of its innovative edge in DRAM and NAND manufacturing technologies to SK Hynix and Micron, reckons Pierre Ferragu of New Street Research, an advisory firm. "When you are not fighting for your life any more, you become complacent," he says. A similar sentiment knocked Intel, America's chipmaking champion, off its pedestal in the late 2010s, when it began losing ground in leading-edge "logic" chips for processing data to TSMC of Taiwan and to Samsung itself.

Samsung's stated goal of becoming number one in contract manufacturing of logic processors by 2030 does not look on track, either—likewise for reasons familiar to Intel. Sales of non-memory chips are the most valuable component of the world's $575bn semiconductor market. They are also the most strategically important, with many governments throwing their weight behind chipmaking to serve national-security interests. Last month South Korea's government announced plans to build the world's largest semiconductor cluster in Yongin, near Seoul.

Chipping away won't cut it

This may not be enough to lift Samsung's share of logic-chip contract manufacturing above 16%, where the firm has been stuck despite being equal to TSMC in manufacturing prowess and maybe ahead in chip architecture. Rivalling TSMC, which controls up to 58% of that lucrative market, may require a more radical change to Samsung's model of making semiconductors for itself as well as for others. The potential conflicts of interest scare off customers such as Apple, whose smartphones compete with Samsung's.

Mr Ferragu does not expect Samsung to forsake its leading position in memory as Intel did in logic. It is the first DRAM-maker to bet heavily on extreme-ultraviolet technology, an advanced manufacturing technique. In logic and memory, it has pledged a combined $230bn in capital spending on new factories over the next 20 years. Still, Samsung would do well to rediscover its inner Lee. Otherwise it risks succumbing to the sense of entitlement that comes with being a national champion. Just look at Intel. ■

Finance & economics

Sovereign-stealth funds

A new era of petrodollar power

What are the hundreds of billions of oil riches being spent on?

A pack of hungry headhunters has descended on Europe's financial quarters. Over coffee in the mid-morning lull, they tempt staffers at blue-chip investment funds with tax-free jobs, golden visas and gorgeous vistas at the firms' clients: sovereign-wealth funds in the Gulf.

A decade in Doha was once a hard sell, but the roles are juicy enough that many would-be recruits volunteer for desert-bound "business trips" to see headquarters. In October recruiters nabbed the second-in-command at Amundi, Europe's biggest money manager, to deploy artificial intelligence at the Abu Dhabi Investment Authority (ADIA), which oversees assets worth $1trn. Now they are chasing others to invest in infrastructure for the Qatar Investment Authority (QIA) and oversee finance for Saudi Arabia's Public Investment Fund (PIF). Together these two funds manage another $1trn.

War and sanctions have buoyed hydrocarbon prices, meaning fuel exporters are swimming in money. During previous booms they would recycle the proceeds in Western capital markets, snapping up pedestrian, uber-liquid assets via banks based offshore. Underpinning this was an unspoken agreement: America would offer military aid and buy oil from Saudi Arabia and friends, in exchange for which they would plug Uncle Sam's gaping current-account deficit with petrodollars. The talent-hunting party suggests the deal is crumbling. Uncle Sam, now a major oil exporter, is a less watchful partner. Gulf states, lured by Asia and eager to mend ties with Israel and, lately, Iran, no longer feel compelled to woo the White House. On April 2nd Saudi Arabia and its allies angered America by deepening crude-output cuts to nearly 4m barrels a day, equivalent to 4% of global production, which helped lift prices. They also feel freer to use their mountains of cash however they wish.

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We estimate that in 2022-23 the current-account surplus of the Gulf's petrostates may hit two-thirds of a trillion dollars. Yet outside central banks, which no longer collect much of the bounty, the region's treasure troves are notoriously opaque. To map where the money is going, *The Economist* has scrutinised government accounts, global asset markets and the deal rooms of companies tasked with investing the windfall. Our investigation suggests that less of the money is returning to the West. Instead, a growing share is being used to advance political aims at home and gain influence abroad, making global finance a murkier system.

The Gulf is not alone in enjoying a windfall. Last year Norway, which cranked up gas exports to Europe as Russia cut supplies, earned a record $161bn in tax from hydrocarbon sales, a 150% jump from 2021. Even Russia, under sanctions, saw such revenue rise by 19%, to $210bn. But it is the Gulf states, which benefit from low production costs, spare capacity and convenient geography, that are hitting the jackpot. Rystad Energy, a consultancy, reckons they pocketed $600bn in tax from hydrocarbon exports in 2022.

Not all of them are in a position to truly benefit. Governments in Bahrain and Iraq are so bloated that even as higher revenues flow in, they barely break even. Most of the bounty is instead being accrued by the four biggest members of the Gulf Co-operation Council (GCC): Kuwait, Qatar, the UAE and Saudi Arabia. Alex Etra of Exante, a data firm, estimates their combined current-account surplus in 2022 was $350bn. Oil prices have fallen since last year, when Brent crude, the global benchmark, averaged $100 a barrel. Yet assuming it stays near $85—a conservative bet—Mr Etra reckons the four giants could still pocket a $300bn surplus in 2023. That makes a cumulative $650bn over the two years.

In the past the majority of this would have gone straight into central banks' foreign-exchange reserves. Most members of the GCC peg their currencies to the dollar, so they must set aside or invest hard currency during booms. This time, however, central-bank reserves seem to be hardly growing. Interventions on foreign-currency markets have also been rare, confirming that the usual guardians of state riches are not getting the surplus.

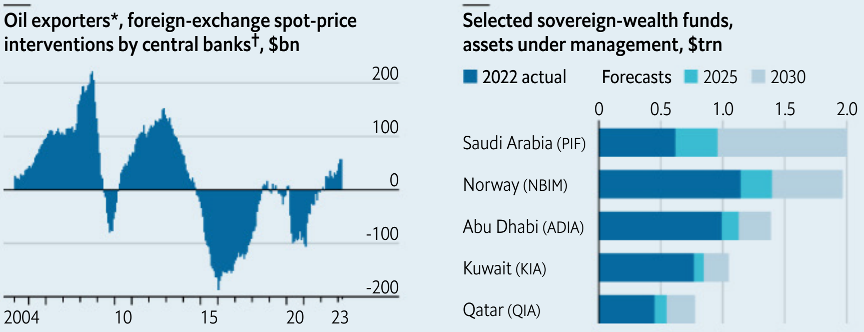
So where have the elusive billions gone? Our research finds they have been used in three novel ways by a variety of actors that include national governments, central banks and sovereign-wealth funds. These are to pay back external debt, lend to friends and acquire foreign assets.

Start with debt. Between 2014 and 2016 a petroleum glut fuelled by America's shale boom caused the oil price to fall from $120 a barrel to $30, the steepest decline in modern history. In 2020, as covid-19 lockdowns depressed demand, prices cratered again, to $18 in April. To withstand the earnings shock, Gulf states liquidated some foreign assets and their central banks sold part of their foreign-currency stash. But this was not enough, so they also borrowed a lot of hard currency on Western capital markets.

Now some petrostates are taking advantage of higher prices to shore up their balance-sheets. Abu Dhabi, the UAE's richest emirate, has repaid $3bn since the end of 2021—about 7% of the total outstanding, according to Alexander Perjessy of Moody's, a ratings agency. Qatar's load has shrunk by $4bn, or about 4%. Kuwait's has halved since 2020. This broad deleveraging is a new phenomenon: GCC countries had little debt in the late 2000s, when the previous oil boom got going.

Gulf states are also lending a hand to friends in need—the second use of the new oil money. In early 2022 the central bank of Egypt, a big food importer squeezed by high grain prices, received $13bn in deposits from Qatar, Saudi Arabia and the UAE. In recent years, Saudi Arabia has also allowed Pakistan to defer payment for billions of dollars in oil purchases. This money is more conditional than in the past. Eager to see at least some of its cash return, Saudi Arabia recently demanded Egypt and Pakistan implement economic reforms before giving them more help. Some of the Gulf support also comes in exchange for stakes in state-owned assets these embattled countries are putting up for sale.

Black gold



Oil exporters*, foreign-exchange spot-price interventions by central banks†, $bn

Selected sovereign-wealth funds, assets under management, $trn

Sources: Exante Data; Global SWF

*All excl. Russia †12-month moving average

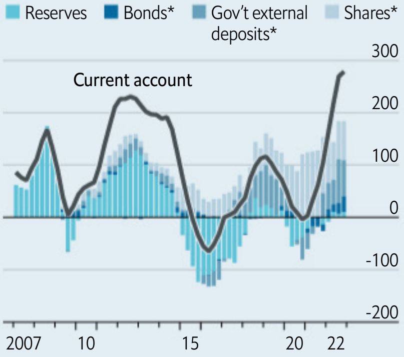
So pumped

The real novelty in this regard is Turkey. When squeezed, Ankara used to turn to the IMF, or European banks, for emergency-cash injections. Recently, as surging inflation and earthquakes have pushed the country to the brink, it is Gulf states that have been holding the syringe. The support takes various forms. On March 6th Saudi Arabia said it would deposit $5bn at the country's central bank. Qatar and the UAE have also set up $19bn in currency swaps with the institution, according to an estimate by Brad Setser of the Council on Foreign Relations, a think-tank. All three have pledged to participate in Turkey's forthcoming auctions of government bonds.

Stocking up

Kuwait, Qatar and Saudi Arabia

Balance of payments, $bn



*Portfolio flows used as a sovereign-wealth-fund proxy

Sources: Council on Foreign Relations; Haver Analytics; IMF; SAMA

Qatar is a long-standing ally of Turkey. Saudi Arabia and the UAE, which until recently had a frosty relationship with the republic, are now competing for influence. All sense an opportunity to gain sway over Recep Tayyip Erdogan, the country's president, who faces a tough election in May. The Turkish case sets a precedent. As more neighbours face crunches, bilateral credit will become core to GCC statecraft, predicts Douglas Rediker, a former IMF official.

Yet for all their geopolitical significance, such loans account for only a fraction of the oil jackpot. That leaves the main escape channel: foreign investments.

In past booms the central banks of the world's two largest petrostates—Russia and Saudi Arabia—did much of the recycling, meaning that the assets they purchased were labelled as reserves. All these countries wanted was stable yields and few surprises. Most often they parked the cash at Western banks or bought super-safe government bonds—so many that Gulf appetite, along with China's, is credited for helping to create the loose monetary conditions that fed the 2000s sub-prime bubble. Only Qatar, known then as the "cowboy of the Middle East", did anything more daring: buying a football club here, a glitzy skyscraper there.

Today the Russian central bank's reserves are frozen. And since 2015, when Muhammad Bin Salman (MBS) became de facto ruler, the Saudi central bank has received far less money than PIF, which MBS chairs. In just a few years PIF and its peers across the region have swelled in size. If hydrocarbons stay expensive, and more of the bounty flows to them, they could grow much bigger still. Everything indicates that their way of recycling riches is very different. It is more adventurous and political, and less Western-centric.

Figuring out what Gulf sovereign-wealth funds have been up to is much more difficult than it would be for, say, Norway's fund. The Gulf institutions do not update their strategy, size and holdings live on their websites, as the one in Oslo does. But there are clues. Data from the Bank for International Settlements, a club of central banks, suggests that, initially, most of the cash was parked in foreign bank accounts. In the Saudi case, such deposits were worth $81bn in the year to September, equivalent to 54% of the current-account surplus over the period, calculates Capital Economics, a consultancy.

Perhaps sovereign-wealth funds have been waiting for interest rates to peak before piling into bonds. More likely they are after less conventional assets, which take time to select. Data from the Treasury International Capital system, which tracks flows into American securities, suggest oil exporters have been buying fewer Treasury bonds than would previously have been expected. But they have been hungrier for stocks—and such numbers understate their appetite, because Gulf sovereign-wealth funds often buy American shares through European asset managers. An executive at one such firm says his Gulf clients have topped up their American-stock accounts copiously in recent months.

Sovereign-wealth funds largely invest in stocks via index funds, which are low cost and offer diversification. But they also like riskier bets. Today "alternative assets"—private equity, property, infrastructure and hedge funds—represent 23-37% of total assets for the three largest funds in the Gulf, according to Global SWF, a data firm. These shares have jumped at the same time as war chests have grown.

Although such investments are often done through funds, "direct" investments—private-market deals, or acquisitions of stakes in listed companies—are growing very fast, says Max Castelli of UBS, a bank. PIF's alone reached $18bn in the year to September, against $48bn for more classic "portfolio" investments. Sovereign-wealth funds have also begun to provide debt to finance large takeovers, including by buy-out groups. On April 4th PIF disclosed that it had acquired dozens of stakes in private-equity firms themselves.

Sovereign-wealth funds can do all this because they now have the ability to manage investments. "Unless we have something extraordinary, we are forbidden from pitching anything to them," says a European asset manager. ADIA has cut its workforce from 1,700 to 1,300 since 2021, but new recruits include a group of maths whizzes co-led by an Ivy League professor. The current hiring offensive suggests funds will grow more independent, retaining investment firms only for specific services and market intelligence.

Since last year sovereign-wealth funds have been dumping European stocks, to the benefit of America. But locals notice a newer eastward tilt. Gulf funds have created specialist teams to survey China, India and South-East Asia. "This is where they're going to sell more oil, so they want to invest in industries that will use that oil," says the boss of a large investment-banking franchise. And at a time when others are walking back from China, nervous of rising tensions with America, they are doubling down. "Our Gulf clients see an enormous opportunity to take space away from Western investors," says the boss of a private-markets giant.

All of which points to an important plank in the sovereign-wealth funds' new approach: advancing Gulf states' strategic goals. One such objective has been to project soft power. PIF may have lost a big chunk of the $45bn it invested in 2016 in the Vision Fund, a gigantic vehicle for tech investments that has been rocked by bad bets and market shocks. But the mammoth cheque did a great deal to raise Saudi Arabia's profile among global investors, says one who recently opened an office in Riyadh. Funds are also setting aside capital to shower on neighbours, boosting their regional sway. PIF has set up subsidiaries in Bahrain, Egypt, Iraq, Jordan, Oman and Sudan to deploy $24bn in the Arab countries.

Greater standing opens up fresh opportunities to invest in firms in "strategic" industries, including renewable energy. In October Mubadala, an Emirati sovereign-wealth fund, splashed $2.5bn on a German offshore-wind developer. QIA bought 10% of RWE, a German utility, to help it acquire a solar business in America. These investments are often made with a view to reimporting knowledge or capital.

Last year Lucid, an American electric-car maker, some 61% of which is owned by PIF, said it would build its first overseas factory in Riyadh. The fund plans to splash $38bn on gaming to try to bring entertainment to Saudi Arabia. Not all such bets turn out well. Saudi National Bank, owned by PIF, lost 80% of its investment in Credit Suisse when the firm was acquired by UBS, undermining the Kingdom's ambition to steer a global banker. Some sovereign-wealth funds are also being leant on to invest at home, so as to help economies cut their reliance on oil. PIF is bankrolling futuristic Saudi settlements, including Neom, a new city in the desert, which the Kingdom's rulers dream will one day be home to a floating industrial complex, global trade hub and luxury holiday resorts.

A vision of the future

The best illustration of the sovereign-wealth funds' evolving strategy is Abu Dhabi. Insiders say that ADIA, the UAE's oldest and starchiest fund, is getting less of the oil windfall than it used to enjoy. Instead, the lion's share is going to ADQ, a four-year-old $157bn fund which snaps up firms in energy, food, transport and pharma—industries the emirate deems core to its security. Other cash is going to Mubadala, which had just $15bn in assets in 2008 but now oversees nearly $300bn. Originally heavy on commodities, its portfolio favours renewables and tech. Two-thirds of its investments are in private markets; a quarter are domestic. "There is no limit to their ambition," says a dealmaker.

Blended finance

These shifts are blurring the line between ruling families' personal wealth and that of the sovereign. The fastest-growing funds tend to be run by royals, or members of their clan. In March Sheikh Tahnoon bin Zayed, the UAE's national-security adviser, was made chairman of ADIA (he already chairs ADQ; his brother will soon run Mubadala). More money is going on pet projects, often through special-purpose vehicles. New "family offices", which manage the private wealth of the mega-minted, have joined the deal-fest. Armed with war chests "in the ten digits", they routinely buy $500m-1bn stakes in single firms, says a local banker. It is becoming ever harder to see where oil money goes.

All this is bad news for the West. That it gets less of the bounty is the smaller problem. A murkier financial system makes it easier for funds to move around unnoticed. Financial sleuths reckon that a share of Russia's oil earnings is deposited into banks in the Gulf, where it is mixed with dollars owned by others so as to become untraceable. More geopolitically astute petrostates also create the chance for wavering countries, like Turkey, to get financing outside of Western-led institutions, giving them an extra degree of freedom. Two decades ago, when sovereign-wealth funds became fashionable, many in the West worried they might be used to pursue political agendas. At the time, such fears were overblown. They now seem more reasonable—but few are paying attention. ■

Inflation

28 years later

KUMAMOTO

After decades of stagnation, wages in Japan are finally rising

KASAHARA YOSHIHISA, boss of Higo Bank, a lender in Japan’s south, beams with pride as he explains plans to lift wages. The firm’s workers will see a 3% boost, as well as regular increases for seniority. But a sheepish look crosses his face when asked about the last time staff saw such a rise. “Twenty-eight years ago,” he admits.

Higo Bank is no outlier. Annual nominal wages in Japan rose by just 4% from 1990 to 2019, compared with 145% in America, according to the OECD, a rich-country club. Unions emphasise job stability over raises; bosses are reluctant to lift pay amid poor productivity growth. This has hampered efforts to escape deflation or low inflation. Thus the Bank of Japan (BOJ) has maintained a doveish policy stance despite headline inflation topping 4% this year.

But recent data suggest change may be on the way: this year’s wage negotiations point to the fastest pay growth in 30 years. Daniel Blake of Morgan Stanley, an investment bank, calls it “the biggest macro development in Japan in a decade”. For Ueda Kazuo, who took over as BOJ governor on April 8th, the data will be a crucial factor in deciding whether to tighten policy.

Parsing Japanese wage figures requires understanding local quirks. Wages are set when firms and unions meet for yearly negotiations known as *shunto* or “the spring offensive”. Headline figures consist of two parts: scheduled seniority-based increases and “base pay”. The latter has more impact on household spending, and thus potential to influence inflation.

According to figures released by Japan’s confederation of labour unions on April 5th, base pay will rise by 2.2% and headline wages by 3.7% this year, compared with 0.5% and 2.1% last year. Blue-chip firms have been particularly generous. Fast Retailing, a clothing giant which owns brands including Uniqlo, gave its regular workers increases of as much as 40%. More data will trickle in until July, as medium- and smaller-sized firms report results. Goldman Sachs, a bank, reckons the final figure will settle at 2% growth in base pay, the highest since 1992.

Consumer prices have risen at a pace not seen in four decades. Although most of the rise comes from cost-push factors, such as imported food and energy, higher headline numbers have raised expectations and placed pressure on bosses. As Mr Kasahara puts it: “Companies have a responsibility to provide wages that match inflation—and not just big firms in Tokyo.” Tight labour markets have also played a role: Japan has compensated for its shrinking, greying population by bringing more women and elderly into the labour force in recent years, but these opportunities are close to being maxed out.

For both workers and the BOJ, the question is whether the raises are a one-off event or a step change. Even this year’s big gains may not be enough to assuage policymakers. Kuroda Haruhiko, the BOJ’s former governor, has said that still higher wage growth will be needed to hit the 2% inflation target. At his final press conference as governor, Mr Kuroda said that although wage negotiations were encouraging, easing should continue. At his first press conference on April 10th, Mr Ueda sounded much the same note. ■

Grievance culture

Global pandemic

SAN FRANCISCO

The “woke mind virus” did not start in America

“TEAM AMERICA: WORLD POLICE”, a comedy puppet film, pokes fun at American self-importance. The theme song boasts of the things the country has created: McDonald’s, the NFL and rock-and-roll; also, less plausibly, liberty, Christmas and books. New work by David Rozado of Te Pukenga–New Zealand Institute of Skills and Technology suggests something else that Americans did not invent: the “woke” phenomenon.

The term refers to a loose constellation of ideas that have changed how educated, left-leaning folk view the world. It says all disparities between racial groups are proof of structural racism; that norms of free speech, individualism and universalism are camouflage for discrimination; and that injustice will persist until systems of privilege are dismantled. The conventional wisdom says that woke ideas began in the social-science departments of American universities, migrated to the country’s newspapers and spread elsewhere.

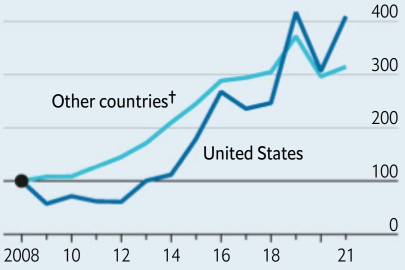
This was always a partial story. The godfathers of woke ideas, including Michel Foucault and Jacques Derrida, philosophers who argued all social relations were really about power, were based largely in France. Mr Rozado’s new paper takes things further. He analyses 98m news articles, tracking words such as “transphobic”, “racist” and “sexist”. The phenomenon, it seems, did not begin in America (see chart). Countries such as Australia, Canada and Sweden in fact led the charge.

Why did America lag behind? Maybe genuine prejudice suddenly became worse outside America, though this seems unlikely. Another possibility relates to the economy. America’s recovery from the global financial crisis of 2007-09 was faster than elsewhere. Anger at the system may have been more acute in other places. A third possibility concerns politics. America has historically been less receptive to left-wing ideas. It is perhaps no surprise that woke ideas were slower to take hold.

Researchers will have quibbles with the methodology: it is hard to rigorously quantify something as slippery as wokeness. Nonetheless, the phenomenon is undoubtedly global. Wherever you go, it is hard to escape social-justice warriors. World police, indeed.

It’s the dream that we all share

Index of words expressing concern with prejudice*, 2008=100



*Featured in news coverage †Sample of 35 countries

Source: “The great awokening as a global phenomenon”, by D. Rozado, April 2023

Banks post-turmoil (1)

The big squeeze

Life is getting tougher for borrowers, even without a credit crunch

After American regulators seized control of a collapsing Silicon Valley Bank (SVB), the fallout felt unpleasantly familiar. The biggest bank failure since 2008 was swiftly followed by others. Signature Bank fell two days later. Another week and fleeing investors had forced Credit Suisse, a 167-year-old Swiss bank, into a hasty tie-up with its rival UBS. Fifteen years ago a cascade of such failures prompted a global credit crunch, as financial institutions drastically tightened lending standards in an attempt to protect themselves, which was followed by the worst downturn in generations. Was a repeat under way?

A month on, the answer appears to be a merciful "no"—or, at least, a "not yet". Investors are shunning bank shares. Those of some regional American lenders have been brutalised: one, First Republic, has seen its stock price plunge by more than 90% since February. For six days after SVB's collapse the bond market was in effect closed, with no new bonds issued by American firms.

Then, in the second half of March, the shutters reopened and both borrowers and lenders rushed back in. All told, investment-grade issuers sold $103bn of debt in March—around last year's monthly average, despite the week-long hiatus. For such issuers, yields have fallen, and "the market's wide open", says Lotfi Karoui of Goldman Sachs, a bank. "The market really hasn't embraced the idea that [the events of March] will morph into a financial crisis." By the end of the month, even the riskiest issuers were again able to raise debt.

Yet even if the risk of a crisis seems to have passed, borrowers still face a squeeze. The most obvious source of pressure is the Federal Reserve, which since March last year has raised its interest rate from close to zero to between 4.75% and 5%. For the firms that have borrowed $1.5trn in loans, which tend to have floating interest rates, the increase has quickly translated to higher debt-servicing costs. For issuers of high-yield bonds, who have borrowed a similar amount and tend to pay fixed interest coupons that only rise when the bond is refinanced, the full effect is yet to be felt. Although the market expects interest rates to be cut by a percentage point this year, the median Fed governor projects an end-of-year rate of above 5%. The more the threat of a financial crisis fades, the more likely the Fed's forecast is to prove correct.

Banks were reluctant to lend even before SVB fell. Mike Scott of Man Group, an asset manager, notes that by the end of 2022 surveys already showed lending standards had tightened to levels that, in previous business cycles, preceded recessions. Last month's ructions, which in America focused on small and midsized banks, are likely to have turned the screws further.

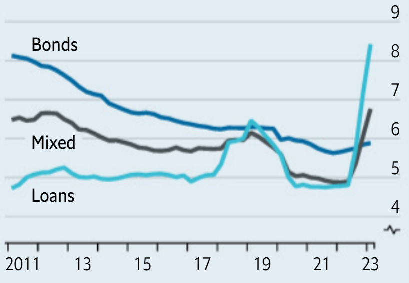
Analysts at Goldman Sachs estimate that banks with less than $250bn in assets account for 50% of commercial and industrial lending, and 45% for consumers. For small firms employing 100 people or fewer, the figure rises to 70%. It is these businesses—which employ more than a third of America's private-sector staff and produce a quarter of its gross output—that will be most sensitive to the forthcoming credit squeeze. Peter Harvey of Schroders, another asset manager, predicts that the outcome will be "stronger covenants, higher [interest] spreads, lower issuance volumes, smaller borrowing sizes and tighter controls on lenders' sectoral exposure".

The final source of stress will be firms' own liquidity, which has deteriorated markedly over the past 12 months. After covid-19 struck, corporate borrowers accumulated huge cash buffers, aided by rock-bottom interest rates and floods of newly created money from central banks. In 2020 the median American investment-grade firm held cash worth 6.5% of its assets, more than at any time in the past 30 years.

This figure has since been eroded to 4.5%, or around the same level as in 2010, after the global financial crisis. As a result, firms now have less scope to run down their existing cash reserves if interest rates stay high, and are more likely to need to borrow in response to future shocks. The banking industry's March madness might not have triggered a repeat of 2008. Life for borrowers is nevertheless becoming increasingly difficult. ■

Uncomfortably tight

United States, high-yield debt by capital structure, weighted-average coupon, %



Sources: Bloomberg; Goldman Sachs Global Investment Research

Correction: In two articles last week ("How to fix the IMF" and "Nightmare on 19th Street") we wrote that an extra $1trn had been committed to the IMF since covid-19 began. This was a misrepresentation and has been changed online. Sorry.

Banks post-turmoil (2)

High-stake cards

WASHINGTON, DC

More and more Americans are gaming the deposit-insurance system

Imagine you are the dealer at a vast card table. There are 3,000 players, each of whom is holding a different number of cards. Some have thousands; others a handful. Each will hold onto some cards and return the rest to you. Your job is to reshuffle the deck and deal it again such that each player has the same number of cards they held before, but none of the same ones they handed over. At any point a player might recall a specific card it once held.

It is a nightmarish task for a poor human shuffler, but a trivial one for the whizzy algorithms that govern the business of managing "reciprocal deposits", in which a bank places deposits with another and receives the same value back, via a few mostly unknown technology firms. These quiet giants of financial plumbing reallocate enormous amounts of deposits. Around $1trn-worth are reshuffled through the platforms, of which about a fifth are swapped in reciprocal arrangements. This is a sizeable slice of the $18trn in total deposits parked with American financial institutions at the end of last year.

Deposit-swapping means banks can offer their customers more insurance. After the failure in March of Silicon Valley Bank, where some 93% of deposits were uninsured, this has become a priority for customers and institutions. The cap on insurance—a regulatory guarantee that money will be repaid in the event of a bank failure—is $250,000 per account holder. Wealthy individuals and businesses often hold more than that. Around 45% of deposits in the American banking system were uninsured at the end of last year.

Those seeking more protection would once have had to plod from bank to bank themselves. If an institution wanted to offer greater deposit insurance by placing deposits elsewhere it would have had to forgo using the deposit as funding. But in 2002 the idea for reciprocal deposits was invented by Eugene Ludwig, who previously ran the Office of the Comptroller of the Currency, a regulator. The firm he and his co-founders set up, IntraFi, allows banks to sign up to place deposits around the system such that they are all insured, while also remitting back to the bank the same value of deposits from other places.

IntraFi was the first firm to do this, and remains by far the biggest. It has 3,000 banks on its platform. However, it has been joined by a handful of other companies, in-

▸▸

cluding R&T Deposit Solutions, the second largest reshuffler with around 350 banks in its network, and smaller players including ModernFi and StoneCastle Cash Management. These firms are now experiencing something of a boom. Kevin Bannerton of R&T says that the value of his company's reciprocal deposits has increased by more than 30% since the beginning of March. He reports that new institutions are clamouring to sign up. Mark Jacobsen, boss of IntraFi, says the company has seen "significant" growth in its reciprocal-deposit business over the same period.

All this deposit-swapping raises the question of whether it makes sense to maintain the federal cap (see Free exchange). The private sector has come up with a clever workaround to offer more deposit insurance than mandated. It is conceivable that, with several thousand banks in the network, an account could offer deposit insurance for hundreds of millions of dollars. Indeed, StoneCastle offers an account with $125m in deposit insurance.

But there is a difference between a private-sector workaround and a public-sector mandate. It is currently difficult to match banks so that all are able to offer such high limits (most offer just a few million dollars' insurance), and reciprocal-deposit firms levy fees, too. They apply on top of the charges, of between 0.05% and 0.32% of the value of total liabilities, that institutions pay for federal-deposit insurance.

Abolishing the cap would make insurance pricier across the system; these higher costs would almost certainly be passed on to customers in the form of lower interest rates. Still, if enough depositors seek insurance by spreading deposits around, higher costs might be the result anyway. ■

Buttonwood Handbags at dawn

What luxury stocks say about the new cold war

Is it in Europe's interests to follow America into a conflict over Taiwan? The suggestion by Emmanuel Macron, president of France, that perhaps it is not provoked anger on both sides of the Atlantic. But many French business leaders will quietly agree with Mr Macron's intention: to defuse tensions between China and the West. After all, the French stockmarket closed at a record high on April 12th, with strong Chinese demand the most obvious cause.

LVMH, a luxury-goods giant, is the largest stock in France's CAC 40 index, making up 13% of market capitalisation. On April 12th the company reported a 17% year-on-year jump in sales in the first quarter. Hermès International, Kering and Pernod Ricard, other luxury brands, account for another 8%. The companies make money not only from Chinese outlets, but from Chinese tourists in Europe. All have benefited enormously from the end of the Chinese government's zero-covid approach.

If the performance of France's China-exposed stocks had been unique, it would have been down to Mr Macron's stance. But if you look at valuations in rich-world stockmarkets, you would never know relations between China and the West are at a 50-year low. The MSCI World China Exposure index, which tracks 50 firms with high Chinese revenues, is up by 7% this year—no less than rich-world stocks overall and beating the more modest 3% rise of the MSCI China index. In the past five years, as China's relations with the West have deteriorated, China-orientated, rich-world stocks have offered annualised returns of 16%, relative to 9% for rich-world stocks overall and -4% for Chinese shares.

In part this reflects concrete realities. Whatever happens to diplomatic relations, rich Chinese consumers are unlikely to cease buying handbags. Some firms with lots of Chinese exposure, including BHP Group and Rio Tinto, two miners, have weathered geopolitical disputes. Although the Chinese government can shuffle the source of its commodities, as a recent short-lived ban on Australian coal demonstrated, such tweaks are ultimately limited by the commodities the country must import.

The three largest companies in the China-exposure index are Qualcomm, Texas Instruments and Broadcom. Not only do these three American firms make between one-third and two-thirds of their revenues in China, they are also all semiconductor companies, operating precisely where spats over advanced tech are likely to be fiercest. Their stock prices have seen double-digit percentage rises this year. They are also beating the S&P 500 index of big American firms, and have done so comfortably over the past five years.

Tasty net-income margins of between 27% and 44% are a big part of the three firms' success, sitting well above the 11% margin of the S&P 500 as a whole. Semiconductor companies will also benefit from support Western governments are now offering to tempt them to build closer to home. Yet if the worst came to pass, and the firms had to leave China, offsetting such large revenue shares would require gargantuan new sources of demand. What is more, only Texas Instruments is a physical manufacturer of chips—the kind of company most likely to benefit from subsidies.

These firms sit at the top of any list of those that will suffer if Sino-American relations worsen. If they are planning for life after China, they are disguising it well. Last month, Texas Instruments doubled down on a commitment to invest more in the country. Qualcomm has partnerships with China Mobile, a telecommunications giant, and a range of Chinese handset manufacturers.

The surprisingly strong performance of Western firms exposed to China suggests two things. The first is that even with the threat of conflict, foreign companies with Chinese exposure are still a much better way to benefit from Chinese economic growth than the domestic stockmarket, which is heavy on state-owned firms and debt-laden property developers. The stockmarket is a third below its level at the end of 2007, despite the country's rapid growth.

The second is that the gap between security hawks and doveish global investors is only growing. It is hard to find any discount for firms with big Chinese revenues. Investors do not believe, or do not want to believe, that businesses with significant exposure to both China and the West will face problems. One of the two views—the increasingly bleak outlook of diplomats, or investors' sanguine approach—will prove to be wildly wrong.

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Realizing he's afraid of heights.

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Tracking same-day payments while stocking the shelves.

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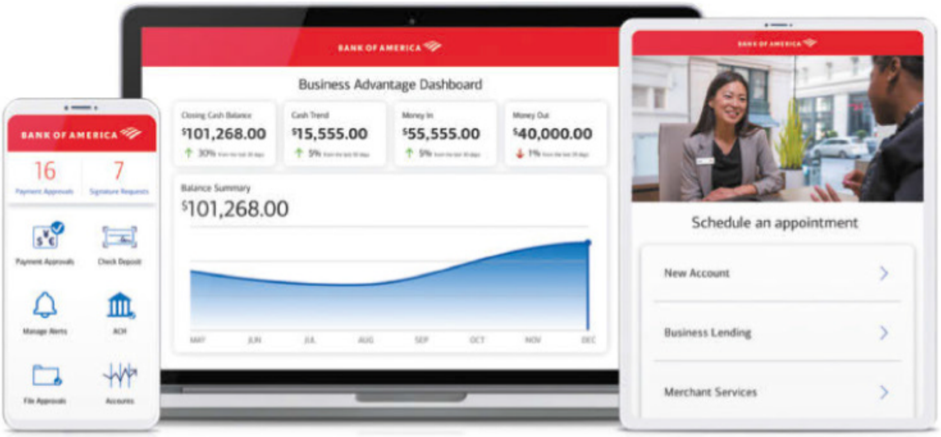

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Free exchange | Lassoed

How the state could take control of the banking system

AMERICA'S BANKING conflagration may have died down, but the clean-up continues. Small and midsized banks have lost about $260bn in deposits this year. The Federal Reserve continues to plug much of the gap, having lent nearly $150bn to banks via its emergency schemes. Next year the Fed must decide whether to prolong them. By May 1st the Federal Deposit Insurance Corporation (FDIC) will produce a menu of options for Congress about how to reform or expand the backstop the regulator provides, which is currently capped at $250,000 per depositor. Many blame the limit for the run which brought down Silicon Valley Bank (SVB).

As happens after every banking panic, the safety-net is being remade. And so regulators must again confront a profound question: how far into finance should the hand of government reach?

Banks are inherently unstable. They offer deposits that are instantaneously redeemable while holding long-dated, illiquid assets such as mortgages and business loans. The mismatch means even well-managed institutions are vulnerable to a run that might be sparked by a misunderstanding. The fragility of banks is matched by severe consequences if they fail: runs tend to be contagious events that can cause credit crunches and recessions.

Despite the danger banks pose, governments tolerate their existence. The transformation of liquidity and maturity is thought to enable a greater provision of credit and faster economic growth than would be possible under the alternative: a system of "narrow banks" in which deposits are fully backed by only the safest assets.

Government props make the system more stable. But every leg of support requires fiddling to stop bankers exploiting the taxpayer. Take deposit insurance, which was established in America under the Glass-Steagall Act after the Depression. Although President Franklin Roosevelt signed it into law and is often credited as its inventor, he in fact tried to have it stripped from the bill, warning it would "lead to laxity in bank management and carelessness on the part of both banker and depositor". Roosevelt may have lost the argument; it is nevertheless true that the more generous the deposit insurance, the less vigilant the depositor and the more it falls to regulators to ensure banks are not taking excessive risks.

Another leg of support comes from central banks, which are meant to stop self-fulfilling panics by acting as a lender of last resort. In a crisis, central bankers follow a dictum attributed to Walter Bagehot, a former editor of *The Economist*, to lend freely, secured by good collateral and at a penalty rate of interest. This means deciding what good collateral is, and how much of a "haircut" (discount) to impose when valuing it. Precisely which assets the Fed or other central banks agree to lend against in a crisis will affect what assets banks choose to hold in normal times.

Central bankers have long been aware of the perils of offering too much support. In 2009 Sir Paul Tucker, then of the Bank of England, warned about central banks becoming the "lender of second resort", freeing banks from having to worry about the liquidity of their assets, so long as these were deemed eligible collateral. Yet central banks are getting more generous. The Fed's latest facilities barely seem Bagehotian at all, valuing long-term securities at par even when the market has heavily discounted them, and imposing an interest penalty of a mere tenth of a percentage point.

The logical accompaniment to the expansion of the banking safety-net would be rules to ensure that the wider net is not exploited. After the global financial crisis of 2007-09 regulators deemed long-term government bonds to be safe and liquid assets, which they assumed would be a source of liquidity for bankers to tap before they turned to the central bank when the next crisis arrived. Now the risks of long-dated assets have been made abundantly clear by rising interest rates, and the Fed and the FDIC carried the can after all. Regulators could respond by redefining the highest-quality liquid assets as bonds that are both short-dated and issued by the most creditworthy sovereign borrowers. To do so, however, would be to take a step towards narrow banking, in which every deposit is backed by such an asset.

This trade-off—between the safety of the banking system and the power of regulators—used to be murky. Some central banks were deliberately ambiguous about what collateral they would accept in an attempt to keep banks on their toes. But new technology seems to be forcing the government's role into the open. Many blame mobile-banking apps and social media for the speed of the run on SVB. If runs are now more likely, so are emergency central-bank loans, making collateral policy still more important.

At the end of Lombard Street

Another looming change is the issuance of central-bank digital currencies, which could give the public another alternative to bank deposits. In recent years economists have worried about the risk of such currencies becoming de facto narrow banks that drain the legacy system. But some argue banks would work fine if the public switched their deposits for central-bank digital currencies, so long as the central bank stepped in to replace the lost funding. "The issuance of [such currencies] would simply render the central bank's implicit lender-of-last-resort guarantee explicit," wrote Markus Brunnermeier and Dirk Niepelt in 2019. This scenario seems to have partly materialised since the failure of SVB, as deposits have fled small banks for money-market funds which can park cash at the Fed, while the Fed makes loans to banks.

The prospect of banks becoming de facto government-funded should alarm anyone who values the role of the private sector in judging risk. Yet the difference between deposit financing underwritten by multiple layers of the state and funding that is provided directly by the state itself is getting harder to distinguish. A more explicit role for governments in the banking system may be the logical endpoint of the road down which regulators have been travelling for some time. ■

Genomics

Twenty years later...

The Human Genome Project has changed biology beyond recognition

BIG IS BEAUTIFUL. That was the message of post-second-world-war science. The model was the Manhattan Project to build the first atom bombs. When hostilities ended, it continued with larger and larger particle accelerators, to probe matter at smaller and smaller scales—and bigger telescopes to do that probing at the largest scales imaginable. And, of course, there was the space race, which at its height in the mid-1960s absorbed more than 4% of America's federal budget. After the Apollo Moon landings it went on to spawn the space shuttle and the International Space Station, as well as a programme of uncrewed missions to explore the nether reaches of the solar system.

Nice for scientists, then. But so 20th century. For all of these projects were essentially about physics. By the late 1980s biologists were gaining confidence that the next century would belong to them. Biotechnology—the ability to tweak DNA itself to make useful products—was taking wing. The number of biologists in training was booming. Some in the field were looking enviously at the physicists and asking themselves where they might queue up to dip their bread in the gravy.

The answer, after the usual political haggling, was the Human Genome Project (HGP), an American initiative globalised through the International Human Genome Sequencing Consortium of 20 laboratories, eight of which were outside the United States. Though cheap by the standards of big physics (its projected cost of $3bn would barely have bought a couple of shuttle launches to the space station), it gave biology a taste of the big time.

It also created a substantial and continuing news story for the media to cover—an Apollo project, if you like, for the discipline. And, by spurring the development of DNA-sequencing technology, by showing how biological research could be organised on a large scale, and by revolutionising the field of molecular genetics with its results, it changed biology itself.

The idea was to spend the money working out the order of the 3bn or so base pairs that constitute the DNA of the human genome. Base pairs are the twin chemical units which form the heart of the double helix that is DNA. Their individual components (A&T and C&G) are the chemical letters of the genetic script.

When the project started in 1990 people thought this script came in two forms: genes and junk. The genes almost all encoded proteins, and transferred their information to a cell's protein-building apparatus via messenger molecules made of a DNA-like substance called RNA. The junk was, well, junk.

A billion here, a billion there

How wrong they were. There is a lot more to functional DNA, it turns out, than protein-coding genes alone. There are now reckoned also to be genes that turn out more than half a dozen classes of non-messenger RNAs, each with a different job to do. Besides those involved in making proteins, others assist in gene regulation, DNA replication and the process of splicing, by which superfluous material is excised from RNA messengers. On top of those are stretches of DNA that serve to regulate how a gene gets expressed in the body's cells.

Even the non-functional DNA is interesting. Much of it consists of self-copying elements called retrotransposons, which might be viewed as the genetic equivalent ▶▶

of parasites, though some have been co-opted into useful roles. Buried among those are fossil remains of ancient viral infections and of genes that once worked, but which natural selection has disabled.

The other unexpected discovery was how few protein-coding genes there are. Predictions at the beginning ranged from 50,000 to 100,000. In fact, the figure is about 20,000. This is more or less the same as turned out to be the case for mice (which had their own, subsidiary genome-sequencing project), and only 50% more than for fruit flies (ditto). Whatever it is that makes human beings bigger and more sophisticated than other animals, it isn't having more genes which encode proteins.

These things, though, took a while to find out. First, the project had to be set up. That happened under the auspices of James Watson, co-discoverer with Francis Crick of DNA's double-helical structure and of the way base-pairing works: in a genetic sequence, A (adenine) always pairs up with T (thymine), and G (guanine) always pairs with C (cytosine). Like the genome itself, the project was a kludge. Besides the complication of its international extension via the consortium, even the American part had two masters. It was dominated by the country's National Institutes of Health (NIH). But the Department of Energy (DOE) was also involved. The DOE's interest in matters nuclear (it runs America's weapons labs), and therefore mutagenically radioactive, had given it a well-established mandate to do genetic research. That complicated the bureaucracy.

No battle plan survives enemy contact

Dr Watson left in 1992, over a dispute about patenting sequences of DNA (he did not want it but the NIH, in certain circumstances, did), and was replaced by Francis Collins, a disease-gene hunter from the University of Michigan. In Britain, meanwhile, the Wellcome Trust (one of the world's biggest medical-research charities) pitched in with a purpose-built sequencing factory called the Sanger Centre (after Fred Sanger, who invented DNA sequencing), near Cambridge. This was to be run by John Sulston, an expert on the genetics of a nematode worm called *C. elegans*. This ended up doing about a third of the work. And then there was the formidable presence of Eric Lander, head of the Whitehead Institute/MIT Centre for Genome Research, in Cambridge, Massachusetts, which he managed to turn into the largest of America's sequencing laboratories.

At the start of the HGP its leaders thought it would take 15 years to complete. But they reckoned without the efforts of the man who would become the project's disruptive-innovator-in-chief—Craig Venter. Dr Venter initially upset the applecart in 1995, by using a novel technique called whole-genome shotgun sequencing to produce the first full DNA sequence of a living organism (a bacterium called *Haemophilus influenzae*).

Then, in 1998, with money from Perkin-Elmer, a scientific-instrument company that was about to launch an upgraded sequencing machine, he set up a rival, private, human genome project, in the shape of a firm called Celera. The plan was that the company would make money from patenting genes it discovered that were thought to have commercial potential.

Whole-genome shotgunning, as the name suggests, blasts entire genomes into sequenceable fragments. It produced results faster than the traditional sequencing methods being used thus far by the HGP consortium. The *H. influenzae* incident was bad enough for those running the official project. That Dr Venter might repeat it with a genome 1,700 times bigger would be even more embarrassing. But what particularly horrified people was the patenting.

After its own early foray in that direction, the NIH had by now changed tack. The official project was putting its discoveries straight into the public domain, making them unpatentable. Dr Watson said in an interview, referring to Celera's approach, "You shouldn't patent something a monkey could do." Sulston was equally critical. "I believe", he said, "our basic information, our 'software' [meaning the genome], should be free and open for everyone to play with, to compete with, to try and make products from...Craig has gone morally wrong."

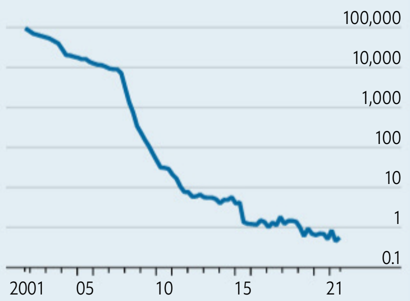
The gloves were now off. Under Dr Lander's tutelage (for he had now become the project's self-appointed knocker-together-of-heads) the public endeavour was reorganised to become truly big science, with an industrialised effort focused on just five laboratories, including his and Sulston's, that had the capacity to scale up quickly. New deadlines were set: to produce a "working draft" by 2001 and to complete the genome sequence in 2003. Celera, meanwhile, built its own genome-sequencing factory, stuffed with Perkin-Elmer's new machines, in Rockville, Maryland, a few kilometres from the NIH's headquarters in Bethesda.

Falling down

1

Cost of sequencing a human-sized genome

$'000, log scale



Source: National Human Genome Research Institute

In the end, a truce was called. In a deal brokered by Ari Patrinos, head of the DOE's side of the project, Dr Collins and Dr Venter shook hands under the benign gaze of Bill Clinton at the White House on June 26th 2000, and the race was declared a dead heat. Both sides, it was agreed, had finished a working draft. In Britain Tony Blair, then prime minister, similarly honoured Dr Sulston and Dr Sanger at 10 Downing Street. Champagne corks popped and everyone celebrated.

The memory lingers on

You can, though, celebrate finishing something only once. So when, on April 14th 2003—as Dr Lander had decreed, and two years ahead of the original schedule—the consortium declared the project truly completed, nobody really noticed. And, in truth, even then it wasn't. That announcement was of a finished sequence which covered 99% of the genome and was 99.99% accurate. But the 99% applied only to the so-called euchromatic parts of chromosomes, the bits where the genes are. It ignored the rest—the telomeres which cap each end of a chromosome, and the centromere that links its two arms—all of which are full of repetitive, and thus hard-to-sequence, DNA.

Yet these bits are important. Telomeres shrink each time a cell divides, limiting the number of possible divisions and so contributing to ageing. And centromeres are the places where chromosomal replication, which precedes cell division, start. But it was only in March last year that this remaining 8% of the genome was fully cracked, by a group called the Telomere-to-Telomere (T2T) consortium. And even that was not the actual end. The completion of the Y chromosome, characteristic of men and also replete with repetitive DNA, was announced by T2T only in December.

So the project is now truly over. But the captains and the kings departed long ago. Dr Watson and Dr Lander are both in the doghouse. In 2007, and again in 2019, the former made some appalling public remarks about genetics, intelligence and black people, and is pretty much shunned as a result. The latter's robust approach to management—which did so much to get the project back on track in the face of Dr Venter's challenge—is now out of sympathy with the times. It led to accusations that he had bullied staff during his brief tenure as President Joe Biden's science adviser, for which he publicly apologised.

Dr Collins, with a skill that the Vicar of Bray would have admired, not only survived two changes of administration as America's chief geneticist but was subsequently, in 2009, made head of the NIH, where he pulled off the same administration-hopping trick, retiring in December 2021. John Sulston died in 2018. Dr Venter set up a not-for-profit research institute in his home of La Jolla, California, which last year he transferred to the University of California, San Diego; and a commercial outfit, Synthetic Genomics (now Viridos), which Dr Patrinos also joined, that works on biofuels.

Extraordinary achievement though it was, no one has yet won a Nobel prize for the Human Genome Project. Perhaps no one will. In the end Dr Watson was half right. Obtaining the sequence itself, if not quite something a monkey could do, was, once the technology was perfected, mainly handle-turning. But what you do with that sequence is another matter.

Transcripts of reality

The sheer complexity of the genome has been a revelation. At a stage of his career when he was working at the NIH, before he left to become the public project's gadfly, Dr Venter had sought to short-circuit the enterprise using a technique called expressed sequence tagging. This employs DNA copies of parts of the RNA messengers (because DNA is a more stable molecule) to characterise genes and also to locate them on chromosomes. On the old model of genes and junk, pursuing this route could have found a lot of the genes (because only the genes would have been transcribed into RNA in a cell in the first place). The junk, in his view back then, could probably have been ignored.

Making "transcriptomes", of which this was an early example, has indeed become a useful tool. But the way RNA messengers are generated is more complex than simply copying a stretch of DNA. Genes themselves contain sequences called exons that end up in the messenger and others, called introns, that don't. (They are copied, but then edited out in the process of splicing.) Also, different messengers, with different combinations of exons, sometimes emerge from the same stretch of DNA.

The discovery of intricacies like this, which give a far better understanding of how cells work than previously existed, has eroded the idea of genetics being a separate discipline and turned it into a branch of molecular biology. One of the most exciting parts of applied biology at the moment is the field of gene-editing, which has both medical and agricultural uses. It relies on tweaked versions of molecular constructs that bacteria use to chop up viral intruders by recognising their genetic material. It uses these to excise and replace bits of DNA in target organisms. Genetics? Molecular biology? Or no distinction?

Understanding genetics at the molecular level also helps the understanding and treatment of disease. This is especially true for cancer, which is caused by mutations of parts of the genome that regulate cell growth and division. It is true, too, for what are known as Mendelian disorders, in which a single malfunctioning gene is the cause of the symptoms. But it has far wider ramifications than these.

The rise of biobanks—mass repositories of data and tissue samples that archive information on people's medical histories and other relevant aspects of their lives, along with their genomes—is beginning to reveal more subtle impacts of genes on health, and especially how genes and environment interact to create disease. Just as any distinction between genetics and molecular biology has now been blurred, so too will the distinction between genetic and non-genetic illnesses.

All this is made possible by the continued improvement and cheapening of the process of sequencing itself (see chart 1 on previous page). The latest machines, from a firm called Oxford Nanopore Technologies, do not even need to break DNA strands into fragments. Rather, they pull an entire strand through a molecular pore mere nanometres in diameter, reading the bases as the strand passes and yielding a result in minutes.

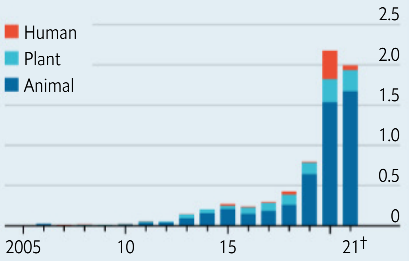
No part of biology is untouched by the consequences of the genome project. Even muddy-boots disciplines like ecology and animal behaviour benefit. They can use sequencing to discover which species are present in an area, and sometimes to count individual animals. Sequencing has also revealed a diversity of micro-organisms on land and at sea that had hitherto just been guessed at, because most such microbes cannot be cultivated in laboratories.

And one other thing. The model of multi-centre collaboration pioneered by the International Human Genome Sequencing Consortium is now a standard way of doing biology. There is still a tension between the sort of diversity the consortium began with and the centralising economies-of-scale approach that Dr Lander imposed at the end. But with the vast improvement in communications brought about initially by email and the world wide web, which rose in parallel with the genome project, and subsequently by social media, huge collaborations are now possible, for example the Human Cell Atlas, which has 1,483 participating organisations scattered around the world.

Building up 2

GenBank, genome sequences*

By date deposited, '000



*Includes partial genomes †To November

Source: "Highly accurate long reads are crucial for realising the potential of biodiversity genomics", by S. Hotaling et al.

What of the downsides? One thing which concerned people in the 1990s was that information about health risks revealed by individuals' DNA might be abused, either by employers or insurance companies. That has not happened so far. If anything things have gone in the opposite direction, with legislation in some places banning discrimination by insurance firms based on the most obvious genetic distinction of all, that between males and females.

Another fear was that genetic knowledge might lead to tinkering for enhancement not just of crops and animals, but of human beings. When somebody actually tried to do this, though, in 2018 in China, the roof fell in on him. He was excoriated by the world's scientists, and imprisoned by his country's government.

To infinity and beyond

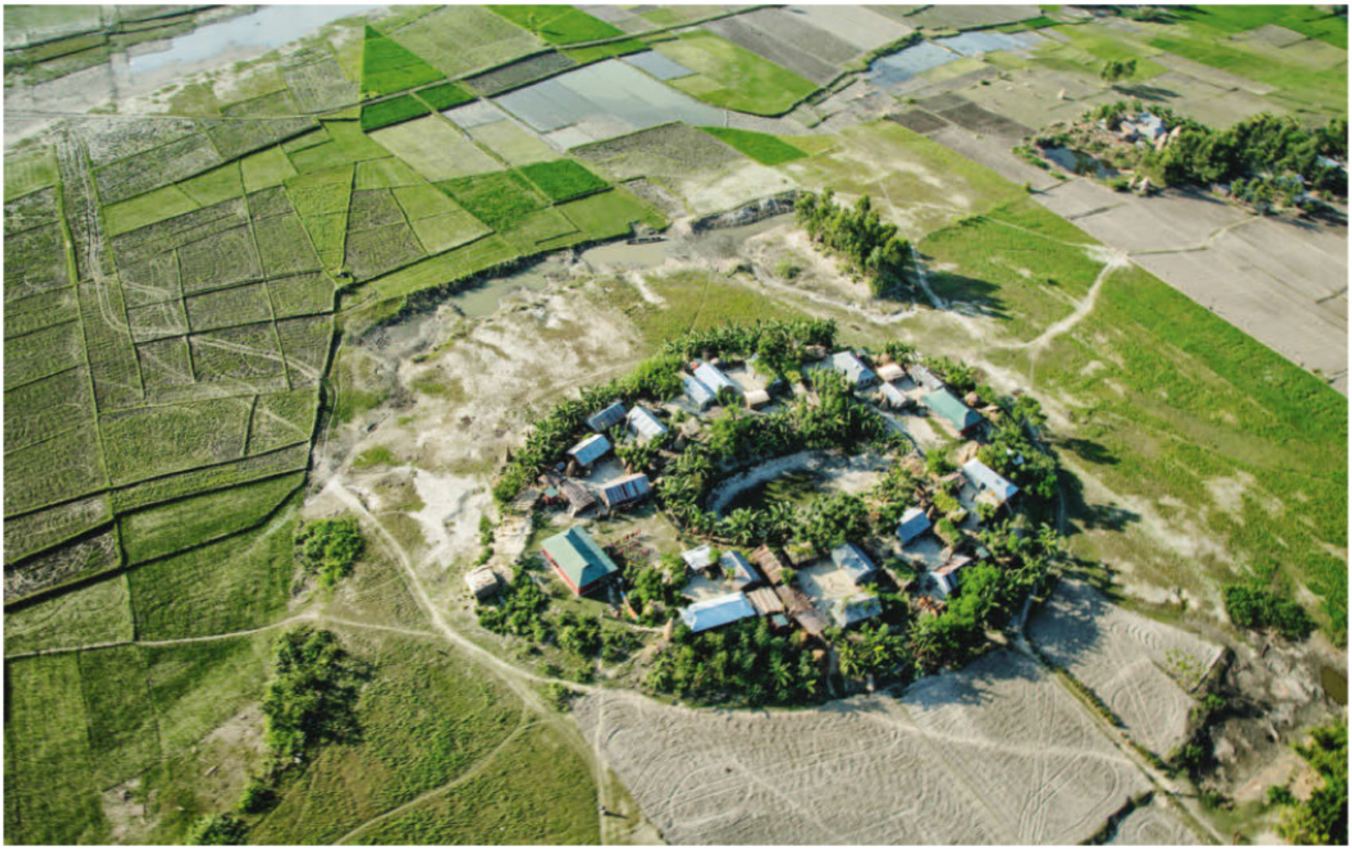
A third worry was that a project which, for obvious reasons, was conducted in a bunch of rich countries, would fail to benefit poorer parts of the world. At the beginning it was indeed true that most human genomes were collected in the rich world. But that is changing.

In 2021, for example, the Three Million African Genomes project was set up to redress the fact that less than 2% of all sequenced genomes were, at that time, African—though Africans form 17% of humanity. The hope is thereby to ask questions the answers to which relate more to Africa than to the rest of the world. More genomes, from many species, are increasingly being added to the world's databases (see chart 2).

The quarrelsome, egotistic white men who set the genomic ball rolling back in the 1990s have thus created something that is changing humanity's understanding of both the world and of itself—even to the point of showing that many non-African people are actually descended from hybridisations between *Homo sapiens* and other species of humans who were already living in Asia and Europe as the former spread from its African homeland.

Genomics has therefore come to form a framework for biology in the way that the periodic table forms one for chemistry. It touches everything. And with that, the ambitions for their subject of those biological prophets of the 1980s are being fulfilled in a manner they could scarcely have dreamed of. ■

Culture



Flood-proof architecture

Walking on water

GAIBANDHA DISTRICT

Bangladesh's riverine villages are benefiting from clever design

TOWARDS THE end of the dry season, Gaibandha, a rural district in northern Bangladesh, is a flurry of activity. In the densely cultivated landscape, villagers are harvesting winter vegetables and bundling up rice seedlings ready for transplanting. Once the monsoon rains come, the paddy fields will erupt in emerald green.

Just beyond the fields, one channel of the Jamuna, as the mighty Brahmaputra river is known in Bangladesh, flows past. The soils of Gaibandha are rich with the silt that the river has carried down for millennia. The Jamuna's waters are a crucial reassurance during times of drought.

Yet on reaching the river, about a kilometre wide here, you see a worrying contrast. Standing on its banks are two-dozen villagers who look palpably worse off and under more strain than the others. When asked about their land, they point, across the extending shallows, to where it was. There, they say, their bamboo huts and their fields stood before floods in 2021 swept all away. An anchored existence one year was gone the next. Even in this low season, sections of the friable bank fall into the ochre water.

In Bangladesh water makes and breaks. Three powerful rivers—the Jamuna, the Padma (the main distributary of the Ganges) and the Meghna—merge to form the world's largest delta. Right now spring melt from Tibetan glaciers is beginning to charge the Jamuna's watercourse. Far out to sea an even more formidable phenomenon is brewing: the South Asian monsoon.

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As summer approaches, the vast Indian subcontinent warms faster than the seas around it. Hot, dry air rises and draws in a moist maritime wind from the Bay of Bengal. This warm, wet air races towards Bangladesh, rises in turn and condenses to fall as rain, while also releasing energy which further drives convection. The Himalayas to the north act as a rampart, thereby intensifying the whole process.

Between June and October, the rivers will burst their banks; the largely flat countryside can sit underwater for weeks. At times, the currents run at over ten knots (18.5kph). Riverine islands made of silt and sand known as *chars*—some several kilometres long—form, vanish and reform in an endless cycle of erosion and accretion. Now climate change is making weather patterns more unpredictable and the downpours more powerful.

More than 7m people live in the *char* districts of Bangladesh, along a crease between water and solidity, seeking out of impermanence its opposite. In the past, government and international organisations hoping to help these people have built concrete embankments that either quickly fail or divert waters to worry another part of the river bank.

Stilt houses are another obvious idea, but a flawed one. For a start, you need to build raised structures able to house a family as well as its livestock. There is a risk that young children will fall in the water. Only concrete structures with deep pilings stand much chance against floods—and they are prohibitively expensive, in part because they do not use building materials to hand in the delta.

It is better to site settlements on raised plinths of densely compacted alluvial earth. Some aid organisations have encouraged the construction of settlements in a long, thin line parallel to the flow of the river. The current can flow from unpredictable directions, however, and quickly punch a hole in the berm's side. A blocky, square-shaped plinth is vulnerable, as the waters hit these with irresistible force. The block's uncompromising shape creates eddies on the downstream side that can also eat away at the back of the structure.

Friendship, a non-profit organisation, takes a more intuitive approach, one that was inspired by a seaplane trip to the remoter *chars* by the company's founder, Runa Khan, and Kashef Mahboob Chowdhury, an architect. Mr Chowdhury, who won the prestigious RIBA International Prize in 2021, has said he was struck by the current-formed contours of the *chars* themselves. Looking at them from above, he could see "they had comet shapes, and left a trail." The best design, he deduced, would be "a teardrop-shaped island which has a rounded elliptical front". This layout would allow water to pass by quickly with minimal damage to the island.

Mr Chowdhury's plinth design is a boat-like form about three metres high, 113 metres long and 73 metres wide (see picture). Villagers' huts line the rim. Since flood water is not safe to drink, in the centre of the plinth village is a hole for rainwater; in the dry season when the pond is low, planted gourds and squash clamber up the sides. Latrines are situated away from the settlement. It is a simple design of genius.

Two-dozen such plinth villages have now been built in the *char* districts, each costing about $50,000. The waters took two early examples, but the others flourish. The most impoverished families get first dibs to live on the plinths. When the waters rise, outlying families come up with their livestock to join them.

At a plinth village surrounded by fields of sweetcorn a few kilometres upstream from Gaibandha, Sadaf shares a bamboo-and-corrugated-iron home with her mother, four-year-old daughter, a cow and four goats. After being forced by the waters to move a dozen times over the years, she says, they have a degree of security they have never enjoyed before.

Often security is ensured, strangely, by mobility. It is no good growing vegetables on a *char* if you do not have the means to take them to market. When Friendship was set up two decades ago, Ms Khan says, its first step was often to help *char* villages get a boat. Denied one, growers have to wait for others to come to them to buy their produce—and accept unfavourable prices. A small, lean boat cleaving the current leaves as light a footprint as it is possible to imagine. It is often the first obvious structure to benefit impoverished *char* communities, especially if built by locals in Bangladesh's "country boat" tradition.

Other, less traditional, vessels followed. Three hours' chug upstream, moored to the opposite bank, looms one of Friendship's two hospital ships, converted with Mr Chowdhury's involvement from a flat-bottomed steel barge. Many *char* communities are cut off even from primary health care, so the hospital comes to them.

It moves up and down the rivers on an advertised schedule, staying at each spot for weeks. Corrugated-iron shelters are set up on land for patients awaiting treatment, or recuperating after it. Each year the ships' 72 doctors, nurses and pharmacists treat 105,000 patients: they deal with everything from skin infections to cooking-fire burns, and also administer vaccines.

The concept has been extended by other non-profit organisations to floating schools: glorious timber-and-bamboo arks bringing the classroom to schoolchildren when, floodbound, the youngsters cannot get to the classroom. For generations, *char*-dwellers have learned to cope in a land that gives and ruthlessly takes away. Design innovations and adaptations may help them thrive for generations more. ■

Epidemiology

Bugs in the system

A new history of humanity puts germs at the centre

Pathogenesis. By Jonathan Kennedy. *Crown; 304 pages; $30. Torva; £25*

For the first 250,000 years after *Homo sapiens* evolved, they existed on Earth alongside several other species of human in Africa, Asia and Europe. Around 50,000 years ago, however, *H. sapiens* left Africa and migrated across the world; around the same time, all the other species began to disappear. The fossil record shows that the last Neanderthals died out roughly 39,000 years ago, leaving only *H. sapiens*.

Why the other humans perished may be the biggest conundrum of the early Palaeolithic age. The prevailing explanation is that *H. sapiens* was more intelligent. In his book "Sapiens", Yuval Noah Harari, a historian, argued that the species went through a kind of "cognitive revolution" between 70,000 and 30,000 years ago, probably after a genetic mutation transformed how they thought. Since *H. sapiens* was brainier than other species, these humans had better communication skills and, presumably, better fighting ability.

A plague in all their houses

According to Jonathan Kennedy, the author of "Pathogenesis", there is a better explanation for why *H. sapiens* prevailed: their immune systems were superior. As their populations boomed, genetic diversity increased and, since they lived in Africa, much closer to the equator than other humans, *H. sapiens* would have been exposed to a greater array of animals carrying a variety of microbes. Some of those microbes would have been pathogenic. (Indeed, the majority of bugs that infect humans are zoonotic—ie, they jump the species barrier from other animals.)

As *H. sapiens* moved across the world, they would have been protected against the diseases carried by the other humans they met. The converse was not true, however, meaning Neanderthals and other humans were less resistant to the diseases carried by *H. sapiens*.

From there, Mr Kennedy goes on to rewrite much of the history of life, with microbes at the forefront. "It's a bacterial world", he writes, "and we're just squatting here." Infections have shaped fundamental elements of mammalian biology, for example. When animals first evolved, they laid eggs in order to reproduce. But a few hundred million years ago, a shrew-like creature developed the ability to grow young inside her body. Geneticists argue that this ability did not evolve naturally, but was suddenly acquired when a virus inserted its DNA into the creature's genome. Without that infection, humans might be hatching from eggs today.

Human civilisations have been shaped by disease, too. Multiple plagues afflicted ancient Romans and Mr Kennedy argues that the death and devastation not only led to the collapse of that empire, it also set in motion the societal changes that allowed Christianity to dominate the world.

Some of his most striking stories come from the Spanish conquest of the Americas. The prevailing story here is that the Europeans had better technology and weapons with which to subdue the less advanced societies in the Americas. That's not entirely true, Mr Kennedy says.

The introduction of infectious diseases from Europe, he writes, resulted in a 90% fall in the population in the Americas, from about 60.5m in 1500 to 6m a century later. If Europeans brought disease to those in the Americas, why didn't American pathogens have a similar effect on the invaders? Many of the diseases Europeans had immunity to had originated in domesticated herd animals such as cows, pigs and sheep. In the Americas, people had also domesticated animals—alpacas, guinea pigs and llamas—but "unlike the ancestors of Eurasian farm animals, alpacas and llamas hadn't lived in vast herds prior to domestication, limiting the opportunities for diseases to emerge and become endemic." People in the Americas would not have been exposed to as many microbes from their farmed animals.

There is a hint of formula about this book: as soon as a new set of characters is introduced, you know infection looms. But that is a minor quibble in a compelling account of the role of bacteria and viruses in world history. Mr Kennedy marshals a dizzying range of material, from the transition from feudalism to capitalism in Europe to the rise of the slave trade to the defeat of the British army by American revolutionaries in Yorktown in 1781.

It helps that Mr Kennedy's epidemiological writing is leavened with pop-culture references: "The Lord of the Rings", "2001: A Space Odyssey" and Monty Python provide on-ramps for some of the complex tales Mr Kennedy tells. Despite the sweeping ideas, therefore, his book is an entertaining read. "Emphasising the role that infectious diseases play doesn't exclude the possibility that humans can have an impact on the world," he concludes. "It's just that very often we don't make history in circumstances of our own choosing, but in circumstances created by microbes." ■

HOME
ENTERTAINMENT

Stars of the stage and screen

Prima donna

Sarah Bernhardt, who died 100 years ago, was the first modern celebrity

"There are five kinds of actresses," Mark Twain once wrote. "Bad actresses, fair actresses, good actresses, great actresses—and then there is Sarah Bernhardt." No one was, or ever had been, quite like her. The French performer was celebrated not only for her enchanting voice, but also as "the queen of the pose and the princess of the gesture". She played the greatest roles written by Dumas, Molière and Shakespeare and is thought to have inspired the character of La Berma in Proust's "In Search of Lost Time". A new exhibition in Paris, "And the woman created the star", marks the centenary of Bernhardt's death in March 1923.

Bernhardt had been acting from a young age, but did not break out until her late 20s, when she played Phèdre in Racine's tragedy at the Comédie-Française. The theatre company was prestigious, yet soon it was Bernhardt the public was flocking to see. After a successful tour of Britain she cut them loose and embarked on the first of several lucrative tours of America. She travelled in a manner appropriate to a modern-day diva, making use of a personal train carriage which carried her maid, cook and leading man.

The public was as enraptured by her unconventional private life as it was by her skill on the stage. Bernhardt was unapologetically, and publicly, promiscuous. It is thought her lovers included Victor Hugo—when she was 27 and he 70—Gustave Doré and the Prince of Wales, as well as a number of her fellow actors. She proudly raised her son, whom she claimed was fathered by a Belgian aristocrat, as a single mother.

She owned a vast menagerie of exotic animals which included a cheetah and an alligator, and kept a satin-lined coffin in her bedroom in which she sometimes slept. It was Bernhardt herself who provided the press with a photograph of the coffin, for she understood the importance of self-mythologising. She cannily took advantage of the latest technology to disseminate her image around the world.

She was photographed by Félix Nadar, considered the first celebrity photographer, and employed Alphonse Mucha, an artist, to create posters of her using the new technique of lithography. Her name was used to sell everything from Pears Soap to Columbia bicycles. A short documentary made by France Culture, available on YouTube, argues that Bernhardt should be considered the first influencer.

Unsurprisingly, she was drawn to the medium of film when it emerged. In 1900 a short recording was made of her turn as Hamlet, in which she can be seen duelling with Laertes. She starred as Queen Elizabeth I in a hit silent film of 1912, and it made her the first international movie star at the age of 68. A few years later she was the subject of one of the earliest "celebrity at home" documentaries.

When Bernhardt died in 1923, at the age of 79, hundreds of thousands of people lined the streets of Paris as her coffin was transported to Père Lachaise cemetery. The monument was engraved only with her name. Nothing else was needed. The world knew who she was. ■

Disaster in the age of sail

High and dry

The Wager. By David Grann. *Doubleday; 352 pages; $30. Simon & Schuster; £20*

A LARGELY FORGOTTEN chapter of a little-remembered war between England and Spain provides the setting for this gripping study of human nature in extremis. *Wager*, a British frigate, crashed onto rocks off the coast of Patagonia while pursuing the enemy into the Pacific in 1741. The seas in that remote part of the world are infamous. "Below forty degrees latitude, there is no law," went a sailors' adage. "Below fifty degrees, there is no God."

A non-fiction account of the chase, the wreck and what followed might have been told as a typical maritime adventure. Those who love yarns involving cannon fire, sea-chests, plum duff and mainmasts will find "The Wager" riveting, as will those less intrigued by the age of sail. In the hands of David Grann, the story transcends its naval setting. The author, whose previous bestsellers include "The Lost City of Z" and "The White Darkness", is a master of exciting tales in far-flung places. He has produced a volume so dramatic and engrossing that it may surpass his previous books.

The tale revolves around three complex figures. *Wager*'s captain, David Cheap, began to lose sway over the men as soon as the ship foundered. The crew became castaways on a small island in the Golfo de Penas ("Gulf of Pain"). Just over half the original complement of 250 had survived outbreaks of typhus and scurvy onboard. Aloof and slow to adapt, Cheap derived his authority from the chain of command rather than natural charisma. But he was also physically brave and loyal to the mission, at one point single-handedly facing down a band of armed mutineers without a weapon of his own.

By contrast, John Bulkeley "emerged as a leader on his own merits". A working seaman whose job, as gunner, was to oversee the ship's cannon, he started foraging food, constructing shelter and bartering supplies from the moment his feet touched land. Others began looking to him for answers. Mr Grann writes that little is known about Bulkeley except that he was a devout Christian who swung hard in a fight. Yet he was no brute: he kept a detailed journal of *Wager*'s travails, peppered with verse.

John Byron, a midshipman, bore witness to the ensuing power struggle. Sixteen years old when he volunteered for naval service, the young gentleman came from one of the oldest noble families in Britain. (His grandson would be the poet Lord Byron.) Mr Grann deftly shows how the trainee officer's allegiance shifted between the captain and the gunner, swayed by notions of pragmatism, duty, survival and, above all, decency. Like Bulkeley, Byron kept a journal that proved an important source for Mr Grann's book.

The marooned crew feuded over where to assign fault and how to get home. They soon split into bitter factions. An indelible scene portrays Cheap and Bulkeley shaking hands as they part ways, never again to reunite. The privations that the men endured over the following months and years are almost unimaginable. After the ravages of shipbound disease and a desperate rounding of Cape Horn, they faced starvation, cannibalism, exposure, abandonment and return journeys to civilisation in small, unseaworthy boats. Only a fraction survived. "I believe no mortals have experienced more difficulties and miseries than we have," wrote one of their number.

The story's astonishing conclusion ought not to be spoiled, but "The Wager" echoes several other recent tales that have pitted bearded men against each other in harsh times and places. Both "The Revenant" by Michael Punke and "The North Water" by Ian McGuire are fictional antecedents. "The Wager" may be bound for similar success as, like those books, it looks headed for the screen. Apple Original Films has bought the rights, with Martin Scorsese attached to direct and Leonardo DiCaprio to star. (The pair is also behind "Killers of the Flower Moon", based on another of Mr Grann's books; the movie will have its premiere at Cannes Film Festival next month.) Expect to hear more about the captain and the gunner. ■

Between the devil and the deep blue sea

Maths in literature

Common denominators

Once Upon a Prime. By Sarah Hart. *Flatiron Books; 304 pages; $29.99. Mudlark; £16.99*

THE MEMBERS of Oulipo—an abbreviation of *ouvroir de littérature potentielle*, or "workshop of potential literature"—gathered in a café in Paris in November 1960. The avant-garde group sought new ways to tell stories; they revelled in constraint. In 1947 Raymond Queneau, the collective's co-founder, had imagined a single short story in 99 different ways in his "Exercises in Style". In 1969 Georges Perec wrote a novel that omitted the letter "e". Three years later he produced a novella in which "e" was the only vowel used.

Sarah Hart describes the work of Oulipo in "Once Upon a Prime" as part of a wide-ranging analysis of the links between maths and literature. The author—who in 2020 became the first woman to hold the position of Gresham Professor of Geometry, thought to be the oldest maths professorship in Britain—seeks to prove that the disciplines are profoundly intertwined. "The perceived boundary between them is a very recent idea," she says.

Professor Hart argues, convincingly, that paying attention to numbers can open up meaning in novels and poems; she explores the role maths plays in literary works such as "Jurassic Park", "Life of Pi" and "Moby Dick". Mathematical allusions can provide insight into a writer's psyche, too. In "War and Peace" Tolstoy "uses calculus as a metaphor for understanding the whole of human history".

Some novelists make maths the theme of their work. Lewis Carroll, a lecturer at Oxford University, combined fantastical escapades with references to puzzles, sums and numerical games in "Alice's Adventures in Wonderland". Alice uses a "proof by contradiction" to expose the Mock Turtle's lies about studying arithmetic. The theme of "Through the Looking-Glass", the sequel, was chess; Carroll included descriptive notation as part of the front matter. His abiding interest was in "the power and possibilities of logic", Professor Hart writes.

Amor Towles, a banker turned bestselling author, gave his novel "A Gentleman in Moscow" a unique, "accordion-like" structure inspired by the power of two. The book covers a period of 32 years. The story starts on a summer solstice—the midpoint of a year—and returns to the characters in

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roughly doubling time spans (one day after, two days, five days, ten days, and so on) until the midpoint of the story. From there, the time frames grow shorter again: from eight years to four years, two years, and beyond. The effect, Professor Hart avers, is to mimic "the way human memory works, and how we experience the passage of time".

"Once Upon a Prime" analyses the "counting, pattern, and therefore mathematics" involved in rhyme schemes and points out writers' love of prime numbers. (Consider the three witches in "Macbeth" and Snow White's seven dwarves.) The book shows how seemingly random dates or figures can contain hidden clues for the reader or hint at the theme of a story. It makes for illuminating prose and the reader may feel better equipped to tackle the books on their nightstand afterwards.

Professor Hart's book is also good fun, written in a light and accessible style. The author explains why giant spiders such as Aragog in "Harry Potter" cannot exist and why the Olympics in 2008 opened at eight minutes past eight o'clock on the eighth day of the eighth month of the year. She furnishes her reader with tongue-in-cheek advice about how to break the record for writing the most limericks, how to optimise a pick-your-own-adventure story and how to decipher encrypted messages.

The book offers answers to some creative conundrums, too. Is 42 the answer to everything, as "The Hitchhiker's Guide to the Galaxy" suggested? How big would Jorge Luis Borges's library have to be to contain every possible book on Earth? Professor Hart tackles these questions with the rigour of a mathematician—and the wit and creativity of a writer. ■

Johnson To the letter

A textbook in Mexico has prompted a debate about non-standard grammar

ONE LETTER does not normally cause controversy, yet a single squiggle has set the Spanish-speaking chattering classes to nattering. A new textbook issued in Mexico seemed to bless a non-standard ending on second-person singular verbs in the past tense: *dijistes* (you said), with an extra "s", rather than the standard *dijiste*, and so on with other verbs. The squabble is instructive, and well beyond the Hispanophone world.

For critics, the sin was twofold. First, the textbook "approved" a usage that, though widespread, is not the official form, which is to say approved by the Royal Spanish Academy and observed by most Spanish-speakers (especially in writing). The second misdeed was that Mexico's education authorities, by acting alone, threatened the unity of the Spanish-speaking world.

Mexico's president, Andrés Manuel López Obrador, reacted with his own hauteur, saying that critics were trying to tell ordinary people to "speak physics" rather than in their natural way. He even played, as is his wont, an indigenous-versus-European card, saying that the Spanish spoken in Mexico "has to do with the roots of ancient cultures".

This linguistic quirk has nothing to do with the country's indigenous heritage, however. The ending in question, which is also heard outside Mexico, is a mere overgeneralisation. In Spanish nearly every other second-person singular verb form ends in an -s, so many people add it incorrectly to verbs in the past tense. This kind of extending of rules to places they don't belong is common, akin to English-speakers erroneously saying "I shrunk" because they rightly say "I swung" or "I strung".

Overgeneralisation may be common, but that does not make it correct. That said, there is a sensible middle ground. It lies in not confusing "standard" with "intelligent" or "virtuous". A standard is just that, like European countries agreeing to share 220-volt electricity. It means that people can carry their gadgets or languages across borders and know they will work. That doesn't make it perfect from some platonic point of view. America, Canada and much of Latin America use 110-volt electricity and that works out, too.

Non-standard forms can be right, preferable even, depending on circumstance. An American saying *y'all* has filled a gap (here the second-person plural) in the English pronoun system, instead of using the standard plural *you*. *Y'all* may not be appropriate for an acceptance speech for a Nobel prize, but it is perfectly fine for the diner counter and especially among family and friends. It signifies warmth and a belonging to the South. Southerners are almost inordinately proud of it, as they have every right to be.

Languages feature variation like this all around the world and are more than able to handle it. Variations on "you" in different languages could fill a textbook. Instead of *y'all*, Pittsburghers have *yinz* and New Yorkers use *youse*. *Thou* is still (albeit barely) found in some northern English dialects. Most Brazilians have dropped their original "you" pronoun, *tu*, and use *você*, which to European Portuguese ears is rather stuffy. And turning to Spanish's own "you", many Latin Americans use *vos* instead of today's European standard *tú*. Different parts of Latin America conjugate verbs with *vos* differently. No chaos has ensued.

Good language textbooks explain this kind of thing. Indeed, the Mexican textbook in question did say "this -s [the last one in *dijistes*] normally isn't written." But it missed a chance to explain that, although the non-standard form is used by many Mexicans, it remains a non-standard, informal variant. A footnote explains that it is important to avoid "judgments based on a form of expression". Yet many people will make those judgments anyway.

Students can be taught to appreciate that, for serious work, it is best to know and use the standard form, even if they joke and bond with the non-standard one. The standard form is also helpful if they are not sure of the background of their listeners.

Too complicated, say some: children need clear rules dinned into their heads. This underestimates them. Youngsters learn early that there are words that are appropriate for some occasions and not others. (If unsure, try asking the little angels of your acquaintance if they know any naughty words not to use around grown-ups.) Opening up a conversation about grammar, style, appropriateness and identity could be a valuable lesson for children learning about language. Not a bad day's work for one little squiggle.

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Economic data

	Gross domestic product				Consumer prices			Unemployment rate		Current-account balance	Budget balance	Interest rates			Currency units	
	% change on year ago latest		quarter*	2023†	% change on year ago latest		2023†	%		% of GDP, 2023†	% of GDP, 2023†	10-yr gov't bonds latest,%		change on year ago, bp	per $ Apr 12th	% change on year ago
United States	0.9	Q4	2.6	0.7	5.0	Mar	4.2	3.5	Mar	-3.1	-5.2	3.4		69.0	-	
China	2.9	Q4	nil	5.7	0.7	Mar	2.1	5.6	Feb‡§	1.9	-2.7	2.7	§§	11.0	6.88	-7.4
Japan	0.4	Q4	0.1	1.0	3.3	Feb	1.9	2.6	Feb	3.0	-5.9	nil		-8.0	133	-6.1
Britain	0.6	Q4	0.5	-0.2	10.4	Feb	6.0	3.7	Dec††	-2.9	-5.4	3.5		168	0.80	-3.8
Canada	2.1	Q4	nil	0.7	5.2	Feb	3.3	5.0	Mar	-0.8	-1.6	2.9		23.0	1.35	-6.7
Euro area	1.8	Q4	-0.1	0.7	6.9	Mar	5.9	6.6	Feb	1.2	-3.6	2.4		156	0.91	1.1
Austria	2.6	Q4	-0.1‡	0.8	9.1	Mar	6.6	5.0	Feb	1.1	-3.5	3.0		172	0.91	1.1
Belgium	1.4	Q4	0.4	0.5	6.7	Mar	5.4	5.8	Feb	-1.8	-4.9	3.0		168	0.91	1.1
France	0.5	Q4	0.3	0.5	5.6	Mar	5.5	7.0	Feb	-1.9	-5.3	2.7		154	0.91	1.1
Germany	0.9	Q4	-1.7	-0.1	7.4	Mar	6.2	2.9	Feb	3.5	-2.1	2.4		156	0.91	1.1
Greece	4.5	Q4	5.6	1.0	4.6	Mar	4.1	11.4	Feb	-7.0	-3.6	4.3		146	0.91	1.1
Italy	1.4	Q4	-0.5	0.8	7.7	Mar	6.8	8.0	Feb	-0.6	-5.0	4.2		180	0.91	1.1
Netherlands	3.2	Q4	2.6	0.7	4.4	Mar	6.1	3.5	Feb	6.8	-2.7	2.7		166	0.91	1.1
Spain	2.6	Q4	0.8	1.4	3.3	Mar	4.3	12.8	Feb	0.3	-4.7	3.3		161	0.91	1.1
Czech Republic	0.1	Q4	-1.4	-0.2	16.7	Feb	11.4	2.5	Feb‡	-1.7	-4.8	4.6		42.0	21.3	5.7
Denmark	1.9	Q4	2.3	0.8	6.7	Mar	5.0	2.8	Feb	9.0	0.5	2.7		158	6.79	0.7
Norway	1.3	Q4	0.8	1.4	6.5	Mar	4.6	3.6	Jan‡‡	20.0	11.4	1.4		76.0	10.5	-16.5
Poland	0.6	Q4	-9.3	0.7	16.2	Mar	13.7	5.4	Mar§	-2.4	-2.9	6.2		5.0	4.24	0.7
Russia	-2.7	Q4	na	-2.1	3.5	Mar	7.5	3.5	Feb§	6.8	-4.4	11.0		18.0	82.5	3.4
Sweden	-0.1	Q4	-2.0	-0.6	12.0	Feb	5.6	8.2	Feb§	3.0	-0.3	2.3		78.0	10.3	-8.5
Switzerland	0.8	Q4	0.1	0.9	2.9	Mar	2.2	1.9	Mar	6.5	-0.7	1.2		29.0	0.90	3.3
Turkey	3.5	Q4	3.8	2.8	50.5	Mar	42.2	10.7	Feb§	-4.4	-3.8	12.5		-1052	19.3	-24.4
Australia	2.7	Q4	1.9	1.6	7.8	Q4	4.6	3.5	Mar	1.7	-2.3	3.2		16.0	1.49	-10.1
Hong Kong	-4.2	Q4	nil	3.4	1.7	Feb	2.4	3.3	Feb‡‡	3.5	-1.4	3.0		16.0	7.85	-0.1
India	4.4	Q4	-3.4	6.1	5.7	Mar	5.6	7.8	Mar	-1.2	-5.9	7.2		2.0	82.1	-7.2
Indonesia	5.0	Q4	na	4.7	5.0	Mar	3.9	5.9	Q3§	0.8	-2.9	6.6		-22.0	14,880	-3.5
Malaysia	7.0	Q4	na	3.5	3.7	Feb	2.3	3.5	Feb§	2.7	-5.2	3.9		-12.0	4.41	-4.1
Pakistan	6.2	2022**	na	1.9	35.4	Mar	24.0	6.3	2021	-3.2	-5.5	15.2	†††	334	288	-36.8
Philippines	7.1	Q4	10.0	4.8	7.6	Mar	5.7	4.8	Q1§	-3.3	-6.4	6.2		19.0	55.2	-5.6
Singapore	2.1	Q4	0.3	1.7	6.3	Feb	5.2	2.0	Q4	18.3	-0.1	2.8		13.0	1.33	2.3
South Korea	1.3	Q4	-1.6	1.5	4.2	Mar	2.8	2.9	Mar§	2.6	-2.1	3.3		-5.0	1,326	-6.8
Taiwan	-0.4	Q4	-1.5	1.9	2.4	Mar	1.6	3.6	Feb	11.8	-2.2	1.3		20.0	30.5	-4.3
Thailand	1.4	Q4	-5.9	3.8	2.8	Mar	2.5	0.9	Feb§	2.1	-2.7	2.5		-3.0	34.2	-1.8
Argentina	1.9	Q4	-6.0	-0.2	102	Feb	90.6	6.3	Q4§	-1.0	-3.9	na		na	214	-47.4
Brazil	1.9	Q4	-0.9	1.0	4.7	Mar	5.2	8.6	Feb§‡‡	-2.9	-7.9	12.6		52.0	4.94	-5.7
Chile	-2.3	Q4	0.2	-0.2	11.1	Mar	7.8	8.4	Feb§‡‡	-5.6	-2.5	5.6		-98.0	802	0.7
Colombia	2.9	Q4	2.7	1.6	13.3	Mar	11.9	11.4	Feb§	-4.7	-4.4	11.5		199	4,443	-15.9
Mexico	3.6	Q4	1.8	1.4	6.8	Mar	5.9	2.8	Feb	-1.0	-3.7	8.8		-4.0	18.1	9.8
Peru	1.7	Q4	-6.0	1.9	8.4	Mar	6.5	7.0	Feb§	-3.3	-1.6	7.5		52.0	3.77	-1.3
Egypt	3.9	Q4	na	3.0	32.6	Mar	25.0	7.2	Q4§	-3.0	-6.9	na		na	30.9	-40.1
Israel	2.8	Q4	5.6	2.9	5.2	Feb	3.8	3.9	Feb	3.9	-2.0	3.8		151	3.67	-12.8
Saudi Arabia	8.7	2022	na	2.8	3.0	Feb	2.2	4.8	Q4	6.6	1.4	na		na	3.75	nil
South Africa	0.9	Q4	-4.9	1.3	7.3	Feb	5.1	32.7	Q4§	-1.9	-4.5	9.9		26.0	18.4	-21.2

Source: Haver Analytics. *% change on previous quarter, annual rate. †The Economist Intelligence Unit estimate/forecast. §Not seasonally adjusted. ‡New series. **Year ending June. ††Latest 3 months. ‡‡3-month moving average. §§5-year yield. †††Dollar-denominated bonds.

Markets

In local currency	Index Apr 12th	% change on: one week	Dec 30th 2022
United States S&P 500	4,092.0	nil	6.6
United States NAScomp	11,929.3	-0.6	14.0
China Shanghai Comp	3,327.2	0.4	7.7
China Shenzhen Comp	2,147.2	0.4	8.7
Japan Nikkei 225	28,082.7	1.0	7.6
Japan Topix	2,006.9	1.2	6.1
Britain FTSE 100	7,824.8	2.1	5.0
Canada S&P TSX	20,454.3	1.5	5.5
Euro area EURO STOXX 50	4,334.0	0.8	14.2
France CAC 40	7,396.9	1.1	14.3
Germany DAX*	15,703.6	1.2	12.8
Italy FTSE/MIB	27,629.3	2.8	16.5
Netherlands AEX	759.5	0.5	10.2
Spain IBEX 35	9,278.7	0.3	12.8
Poland WIG	60,262.5	2.9	4.9
Russia RTS, $ terms	975.5	-1.2	0.5
Switzerland SMI	11,232.0	1.0	4.7
Turkey BIST	5,146.1	4.6	-6.6
Australia All Ord.	7,538.9	1.4	4.4
Hong Kong Hang Seng	20,309.9	0.2	2.7
India BSE	60,392.8	1.2	-0.7
Indonesia IDX	6,799.0	-0.3	-0.8
Malaysia KLSE	1,434.7	0.4	-4.1

	index Apr 12th	% change on: one week	Dec 30th 2022
Pakistan KSE	40,126.1	1.0	-0.7
Singapore STI	3,286.1	-1.0	1.1
South Korea KOSPI	2,550.6	2.2	14.1
Taiwan TWI	15,933.0	0.4	12.7
Thailand SET	1,592.7	1.4	-4.6
Argentina MERV	266,850.0	5.5	32.0
Brazil BVSP*	106,889.7	5.9	-2.6
Mexico IPC	54,333.1	1.6	12.1
Egypt EGX 30	16,741.5	-1.6	14.7
Israel TA-125	1,739.6	0.3	-3.4
Saudi Arabia Tadawul	10,935.4	0.1	3.7
South Africa JSE AS	77,740.7	1.4	6.4
World, dev'd MSCI	2,795.5	0.4	7.4
Emerging markets MSCI	993.6	0.6	3.9

US corporate bonds, spread over Treasuries

Basis points	latest	Dec 30th 2022
Investment grade	154	154
High-yield	507	502

Sources: Refinitiv Datastream; Standard & Poor's Global Fixed Income Research. *Total return index.

Commodities

The Economist **commodity-price index**

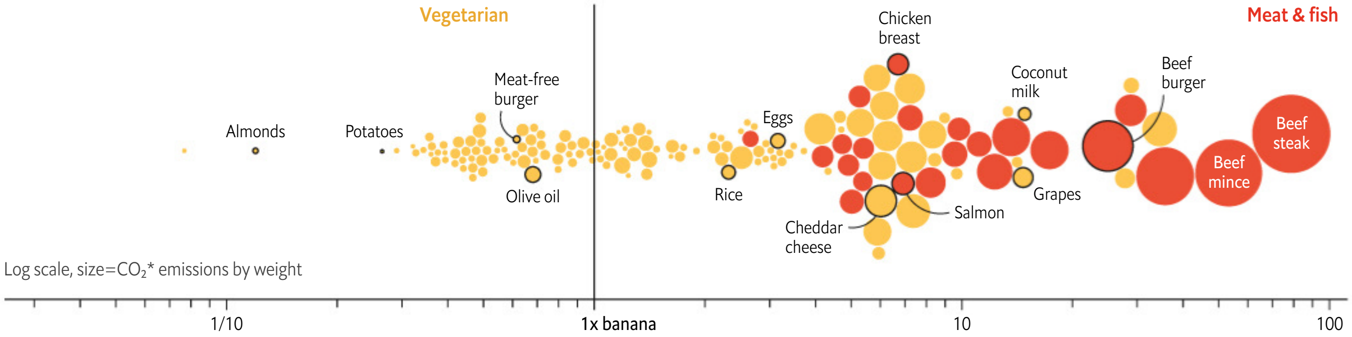
2015=100	Apr 4th	Apr 11th*	% change on month	year
Dollar Index				
All Items	156.3	154.1	-2.2	-20.0
Food	141.4	141.4	1.5	-13.9
Industrials				
All	170.1	166.0	-4.9	-24.2
Non-food agriculturals	123.1	119.6	-2.6	-33.6
Metals	184.1	179.8	-5.3	-22.1
Sterling Index				
All items	190.5	189.2	-4.4	-16.1
Euro Index				
All items	158.0	156.6	-3.9	-20.3
Gold				
$ per oz	2,021.9	2,004.4	5.3	1.5
Brent				
$ per barrel	84.9	85.7	10.5	-18.2

Sources: Bloomberg; CME Group; Cotlook; Refinitiv Datastream; Fastmarkets; FT; ICCO; ICO; ISO; Live Rice Index; LME; NZ Wool Services; Thompson Lloyd & Ewart; Urner Barry; WSJ. *Provisional.

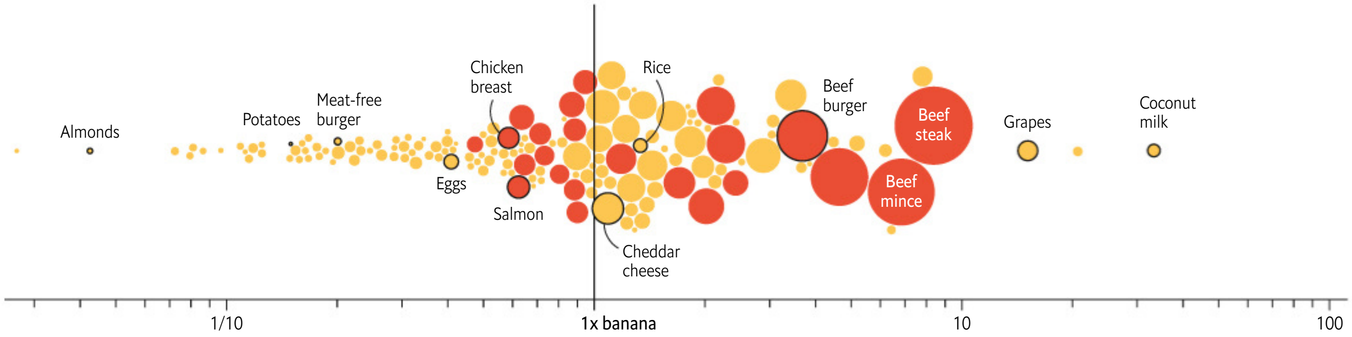
For more countries and additional data, visit
economist.com/economic-and-financial-indicators

→ Accounting for nutritional value makes the climate impact of nuts and oils look better

Emissions by calorie count
Banana=0.876 kg CO_2* per 1,000 kcal



Emissions by protein content†
Banana=7.72 kg CO_2* per 100g protein



*Or CO_2-equivalent †Excluding foods without protein such as olive oil Sources: Our World in Data; "Estimating the environmental impacts of 57,000 food products", by M. Clark et al., *PNAS*, 2022

The banana index

Want to reduce the carbon footprint of your diet? Go nuts

EATING A JUICY steak is worse for the environment than frying up some tofu: that much should come as no surprise. Going vegan can dramatically cut the carbon footprint of your diet. But what about the fewer calories, and lower levels of protein, found in most plant-based foods when compared with meat? That makes it hard to compare emissions of meals that are equally nutritious.

To make the relative carbon impact of foods easier to digest, *The Economist* proposes a banana index. It compares popular foodstuffs on three metrics—weight, calories and protein—indexed to the humble banana, a fruit of middling climate impact and nutritional value.

Indexing greenhouse-gas emissions to a single food gives a sense of how different foodstuffs rank. Unfortunately for carnivores, beef is bad for the environment no matter how you slice it. Producing one kilogram of mince causes as many emissions as 109kg of bananas (call it a "banana score" of 109). Adjust for nutritional value, and beef's banana score falls to 54 (one calorie of beef mince causes 54 times as much carbon emissions as one calorie of banana). By protein, it scores seven.

Poultry scores 11 bananas by weight and four by calorie. However, as a source of protein, it is more carbon-friendly: a given amount of protein produces 40% less emissions from poultry than from bananas. The same applies to salmon. Unsurprisingly, plant-based alternatives to meat do even better: a meat-free burger, for instance, scores just one-fifth of the emissions of bananas per gram of protein. (Other plant-based foods, such as grapes, sugar and coconut milk, contain barely any protein, which sends their banana scores soaring.)

Some foods that out-emit bananas on one metric put them to shame on another. The biggest variance between emissions by weight and calories is in olive oil, which has a banana score of six when measured by weight, but 0.7 by calories. Others include breakfast cereals, cashew nuts and croissants—which all flip from bad scores to good when measuring by calorie.

Our banana index relies on average emissions for a given food. In the real world some producers are more climate-friendly than others, and some foods travel farther to consumers. But in most cases, differences between foods are much greater than these variables within them. For all the emphasis on locally produced food, transport contributes less than 10% of most foods' total emissions; for beef it is usually less than 1%. Our banana index also does not capture other environmental impacts, such as land and water use (though here too, beef tends to fare poorly).

Polling in Europe by Ipsos for Yara, a fertiliser firm, suggests that most consumers want to be more climate-friendly—and with food production responsible for perhaps a quarter of global emissions, eating with the climate in mind would make a difference. The survey showed that just 31% of respondents found it easy to make sustainable choices. Three-quarters said they want labels that would explain the climate impact of their food. Studies have found that labels encourage consumers to choose lower-emission options, although they are not in widespread use. In the meantime, our banana index might help. ■

Interactive version online

Explore our banana index in more detail at **economist.com/bananaindex**

To look misery in the eye

Traute Lafrenz, the last of the White Rose resistance circle, died on March 6th, aged 103

THE LEAFLETS are called *Flugblätter* in German: "flying sheets of paper". And on that February morning in 1943, they did just that. The students had been carrying so many in their suitcase—perhaps 1,800—far too many to deliver safely. And so in high spirits, or maybe foolishness, they had just thrown the rest over the balustrade into the grand atrium of Munich University below. Down fell the leaflets begging their "Fellow Students!" to stand up to the Nazis. Down, like snow, fluttered the leaflets raging against the "godless, shameless" Nazis. Down, down fell the leaflets bearing the cry: "Freedom and honour!"

The Gestapo, when they finally arrested Traute Lafrenz, would ask her about those leaflets. Did she know about them? Yes, she said, now they mentioned it, she did. Her friend Hans had shown her one. And did she understand, the Gestapo asked, that such a leaflet was subversive material? Of course Traute understood. How could she not? Her friend Hans had already been executed for them, as had his sister Sophie and her friend Christoph. Her friends were being picked off one by one. Clearly she might be next. So did she understand, the Gestapo asked? Did she understand that they were subversive? Yes, she did, she said demurely; but it had seemed harmless, really, such nonsense!

And in a way, it had been harmless at first. Later, decades later, when streets had been renamed after the White Rose group, and films made of them, and statues sculpted of them, people would start to call it an "organisation" and her a "hero". No, she said. There was no "organisation". There was just her friend Hans, and his sister Sophie and some other friends. And they had done the leaflets, that was true: six in all, as well as some graffiti (Hans had painted "Down With Hitler!" and "Freedom!" all over Munich). But they hadn't just done that: there had also been walking and biking and bathing and reading Tolstoy and falling in love. And she didn't like that word "hero": she was no hero. Just a witness.

Later, when she was living out her long life in America, Traute would always wonder: why Hans? Why had he started all this? He had been a much better Nazi than she at first. She'd never liked the Nazis: all that "Heil Hitler-ing" and shouting at school had grated on her; when one teacher had cursed her she'd just got on her bike and gone home. But Hans had willingly joined the Hitler Youth; he'd even been a banner-carrier at a Nuremberg rally—the photos show the sort of profile Leni Riefenstahl would have lingered over. But then his unease grew; then he began the leaflets. Then he was sent to the Eastern Front. On the way, the soldiers' train had gone through Warsaw and they had seen the ghetto. "Misery looks us in the eye," his friend wrote. "We turn away." Then they turned back.

For the first run of leaflets, in the summer of 1942, the students had only managed 100 copies. Then they got better, typing them out on an old Remington typewriter then hand-cranking a duplicating machine: in later runs they did 10,000. The tone of the leaflets was uncompromising. They raged at the Germans for being "a shallow, spineless herd of mindless followers"; they raged at the slaughter of Stalingrad and at the "bestial" murder of hundreds of thousands of Jews. And above all they raged at German apathy. No German, the leaflets said, could claim to be free of these "inhumane crimes". Every German, they said, "is GUILTY, GUILTY, GUILTY". And they would not let them forget it: "We are your bad conscience. The White Rose will never leave you in peace!"

Many of her friends had got involved, despite the danger. Hans just had this charisma that attracted people. It was he who had come up with the "White Rose" title too, though from where she had no idea. He'd wanted something that would resonate and the "White Rose" did—though with what she was never quite sure. Medieval ideas of pure, elevated love, perhaps? Or maybe the French revolution—hadn't the aristocrats put white roses on their banners? That association would later gain other resonances. Because when the authorities caught Hans and tried him and found him guilty, guilty, guilty, they cut off his head with a guillotine.

She hadn't done much, Traute was always clear on that: she'd just helped get paper and envelopes. Though they had to be careful: just buying paper was dangerous. Later, the Nazis would call their leaflets the "worst incident of highly treasonous propaganda" of the whole war. But Traute would always remember how calm Sophie had been: that January the two of them had just strolled through Ludwigstrasse, delighting in the sun and the warmth, to the stationer's shop. There had been a horse outside and Sophie had stroked his neck. "Hey, Buddy!" she had said; then she'd walked into the shop with that same happy face. They'd cut her head off with a guillotine, too.

It had all happened so fast. On the Thursday, just before Sophie threw those leaflets into the atrium, she had spotted Traute and called out to her. "Hey!" she'd said. Those ski boots Traute wanted to borrow? She should just take them, Sophie said, "in case I'm not home this afternoon."

Sophie did not come home. The university's caretaker had seen her throw the leaflets in the atrium; he rushed up the stairs and caught her and Hans. Their trial began on Monday morning and ended at 1pm. At 5pm, Sophie was led to the guillotine; then Hans. Just before the blade hit his neck, he had shouted out: "Long live freedom!" The whole thing was over in under ten minutes.

Traute didn't escape; she would go to prison for a year, but she never complained: what right did she have to? But the leaflets didn't die with her friends' deaths. Somehow, a copy of that one from the atrium found its way out. It was taken to Norway, then to Sweden, then to England, being copied as it went. Then that July, the RAF flew copies of it to Germany and dropped them.

For the second time that year, down fell the *Flugblätter*; not in their hundreds this time, or in their thousands, but in their millions. Down fell the leaflets begging Germans to "Fight against the party!"; down, like snow, fell the flying pieces of paper raging against Hitler. Down, down fell the cry: "Freedom and honour!" ■

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HORIZONS NEVER END
LOUIS VUITTON